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United States Court of Appeals

FOR THE EIGHTH CIRCUIT

No. 17,540.

CIVIL.

CALMAR, INCORPORATED,
Appellant,

vs.

COOK CHEMICAL COMPANY,
Appellee.

No. 17,541.

CIVIL.

COLGATE-PALMOLIVE COMPANY,
Appellant,

vs.

COOK CHEMICAL COMPANY,
Appellee.

APPEALS FROM THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF MISSOURI.

INDEX

Volume I

Proceedings in United States District Court in the Case of Calmar, Incorporated, v. Cook Chemical Co. 1
Complaint 1
Answer and Counterclaim 3

Answer to Counterclaim 5
Amended Answer to Counterclaim 5
Proceedings in United States District Court in the Case of Colgate-Palmolive Co. v. Cook Chemical Company 9
Complaint 9
Answer to Complaint and Count I of Counterclaim 12
Reply of Plaintiff to Counterclaim of Defendant, Section I 14
Order Sustaining Motion to Consolidate Cases 15
Order Admitting into Evidence Plaintiff's Exhibits ZZ and AAA 16
Memorandum Opinion; Findings of Fact and Conclusions of Law of District Court 17
Judgment, July 31, 1963 36
Order Admitting in Evidence Plaintiff's Exhibits AB, AC and AD 38
Notice of Appeal of Calmar, Inc., and Colgate-Palmolive Co. 39
Docket Entries in District Court in No. 12349-3 40
Docket Entries in District Court in No. 13006-3 45
Transcript of Evidence 49
Caption 49
Colloquy between Court and Counsel 49
Testimony for Defendant 50
Ralph G. Martin 50
Defendant Wise Deposition Exhibit 5, Recital As to .. 56
Defendant's Exhibits 57
24, Recital As to 57
42, Recital As to 57
30, Recital As to 58
28, Recital As to 58
44 and 46, Recital As to 59
48 and 50, Recital As to 59
Plaintiff's Exhibits A and B, Recital As to 61
Plaintiff's Exhibit C, Recital As to 65
Defendant's Exhibit 34, Recital As to 65
Plaintiff's Exhibit D, Recital As to 66
Statement to Court by Mr. Gordon Schmidt 70
Robert Wise 71
Defendant's Exhibit 26, Recital As to 74
Defendant's Exhibits 152, 154, 156, 158, 160, 162, 164, Recitals As to 76
Defendant's Exhibit 166, Memorandum from John F. Boehm to Robert Wise, August 29, 1958, Excerpt from 77
Defendant's Exhibit 150, Recital As to 78

Defendant's Exhibit 198, (Reproduced in Exhibit Volume) 81
Clarence T. Fishleigh 82
Defendant's Exhibit 10, Patent in Suit, Recital As to (Reproduced in Volume of Exhibits) 84
Defendant's Exhibit 54, Recital As to 84
Defendant's Exhibit 72, Recital As to 89
Defendant's Exhibit 90, (Reproduced in Exhibit Volume) 94
Defendant's Exhibits 74, 76, 78, 80, 82, 84 and 86, Recitals As to 95
Defendant's Exhibits 88 and 90, Recitals As to 96
Defendant's Exhibits 102, 104, 106, 108, 110 and 112, Recitals As to (Exhibits 110 and 112 in Vol. of Exhibits) 104
Defendant's Exhibits 114, 116 and 118 (Reproduced in Volume of Exhibits) 106
Harry G. Austin, Jr. 107
Defendant's Exhibits 31 and 33 (Reproduced in Exhibit Volume) 108
Defendant's Exhibit 35 (Reproduced in Exhibit Volume) 109
Clarence T. Fishleigh, Recalled 111
Defendant's Exhibit 120, (Reproduced in Exhibit Volume) 111
Plaintiff's Exhibit F, (Reproduced in Exhibit Volume) 124
Plaintiff's Exhibit G, (Reproduced in Exhibit Volume) 130
Plaintiff's Exhibits H and I, Letters Patents, (Reproduced in Exhibit Volume) 140
Baxter I. Scoggin 143
Plaintiff's Exhibits J and K, Recitals As to 159
Plaintiff's Exhibits L and M, (Reproduced in Exhibit Volume) 160
Plaintiff's Exhibit N, Recital As to 161
Plaintiff's Exhibit O, Recital As to 162
Defendant's Exhibits 136 and 138, Recital As to 173
Testimony for Plaintiff 173
Colloquy between Court and Counsel 173
Recitals As to Exhibits, P to Z, and AA to CC 173
Chester M. Turner 175
Ralph G. Martin, Recalled 179
Robert Wise, Recalled 180
Defendant's Exhibit 82, Recital As to 182
Plaintiff's Exhibits 183

DD, (Reproduced in Exhibit Volume) 183
EE, (Reproduced in Exhibit Volume) 183
FF, (Reproduced in Exhibit Volume) 184
HH-1 to HH-15, (Reproduced in Exhibit Volume) 186
Joseph McCormack 194
Plaintiff's Exhibit II, (Reproduced in Exhibit Volume) 196
Plaintiff's Exhibits JJ and KK, (Reproduced in Exhibit Volume) 198
Plaintiff's Exhibit LL, (Reproduced in Volume of Exhibits) 199
Plaintiff's Exhibits MM, NN and OO, (Reproduced in Volume of Exhibits) 199
Douglas F. Corsette 200
Plaintiff's Exhibits 201
PP, (Reproduced in Exhibit Volume) 201
QQ, (Reproduced in Exhibit Volume) 202
Defendant's Exhibits 224
121, (Reproduced in Exhibit Volume) 224
122, Recital As to 224
Lawrence C. Kingsland 239
Plaintiff's Exhibit VV, Recital As to 244
Plaintiff's Exhibits 262
WW and XX, Recitals As to 262
Offer of Exhibits in Deposition of Mr. Scoggin 262
26 and 27, Recitals As to 264
16, Recital As to 264
17 and 18, Recitals As to 265
Testimony for Defendant in Rebuttal 271
Baxter I. Scoggin 271
Defendant's Exhibits 272
124, Recital As to 272
210, (Reproduced in Exhibit Volume) 272
Clarence T. Fishleigh 272
Defendant's Exhibit 222, Recital As to 279
Defendant's Exhibit 224, (Reproduced in Volume of Exhibits) 282
Deposition of Richard High, Excerpts from (Plaintiff's Ex. LL) 285
Deposition Exhibits 125 and 126, Recitals As to 287
Deposition of Anthony J. Ratichek, Excerpts from (Plffs. Ex. XX) 289
Deposition Exhibits 291
130 and 131, Recitals As to 291

132, Recital As to 291
133, Recital As to 295
134 and 135, Recitals As to 295
Deposition of Robert D. Wise, Excerpts from (Defendant's Ex. 206) 298
Deposition Exhibit 1, Recital As to 301
Deposition of E. G. "Pat" O'Reilly, Excerpts from (Defendant's Exhibit 138) 313
Deposition of James A. McNeill, Excerpts from (Defendant's Exhibit 134) 319
Deposition of Lee E. McIntyre, Excerpts from (Defendant's Exhibit 130) 328
Deposition of Andrew M. Martin, Excerpts from (Defendant's Exhibit 136) 334

VOLUME OF EXHIBITS

Index to Exhibits

Plaintiff's Exhibits 341
C, (Scoggin Deposition Exhibit 67), Defendant's Circular to Trade, November, 1959 341
E, (Scoggin Deposition Exhibit 13), Application for Scoggin Patent in Suit 347
F, Claim 18 of Scoggin Application Viz-a-Viz Claim 25 (Claim 1 of Patent in Suit) 379
G, Photograph of Large Scale Model of Device of Patent in Suit, Scoggin Patent No. 2,870,943 381
G-1, Photograph of Model (Exhibit G) with Pump Plunger Removed 383
H, Letters Patent No. 2,715,480 to J. G. Livingstone, August 16, 1955 385
I, Letters Patent No. 2,763,402 to J. G. Livingstone, September 18, 1956 390
J, Preliminary Sketch of Bakan 2 Sprayer Parts 396
L, (Scoggin Deposition Exhibit No. 40), Memorandum from Chester M. Turner to Baxter I. Scoggin et al. 397
M, (Scoggin Deposition Exhibit No. 37), Preliminary Sketch of Bakan 2 Sprayer, February 11, 1957 399
P, Drawing of Bakan 1 Sprayer 401
Q, Drawing of Bakan 2 Sprayer 403
S, Drawing of Bakan 3 Sprayer 405
T, Letters Patent No. 2,119,884 to F. W. Lohse, June 7, 1938 407
U, Letters Patent No. 2,586,687 to R. Mellon, February 19, 1952 410

V, Letters Patent No. 2,861,839 to R. Mellon, November 25, 1958 414
Y, Letters Patent No. 2,434,875 to F. M. Turnbull et al., January 20, 1948 419
DD, Defendant's Advertising—Bakan 2 Sprayer 429
EE, Defendant's Advertising—Bakan 2, Modified Sprayer 431
FF, Defendant's Advertising (1961) Omitting Reference to Bakan 2 Sprayer 433
GG, Defendant's Advertising—Bakan 3 Sprayer 438
HH 1-13, Photographs of Physical Exhibits Illustrating Various Packaging Methods 440
II, Summary of Sales in 1958 of Colgate's Insecticide with Sprayer on Side of Bottle 454
JJ, Enlarged Drawing of Livingstone Patent No. 2,751,480 455
KK, Enlarged Drawing of Mellon Patent No. 2,586,687 457
MM, Letters Patent No. 2,844,290 to W. J. Slade, July 22, 1958 459
NN, Letters Patent No. 2,118,222 to O. G. Nilson, May 24, 1938 462
OO, Letters Patent No. 1,447,712 to J. W. Darley, Jr., March 6, 1923 468
PP, Photograph of Large Scale Model of Accused SS40 Sprayer 471
PP-a, Photograph of Large Scale Model of Accused SS40 Sprayer 473
QQ, Drawing of Accused SS40 Sprayer 475
VV, Drawing of SS40 Sprayer 477
YY, (Scoggin Deposition Exhibit No. 27) Drawing of Accused SS40 Sprayer 479
ZZ, Stipulation Concerning Commercial Sprayers 480
AB, Letters Patent No. 3,064,865 to B. I. Scoggin et al., November 20, 1962 496
AC, Excerpts from Scoggin et al. Application 835,680 (Patent No. 3,064,865) 501
AD, Excerpts from Forfeited Scoggin et al. Application No. 789,902 504

Defendant's Exhibits 510
10, Letters Patent No. 2,870,943 (Patent in Suit), to B. I. Scoggin, Jr., January 27, 1959 510
31, Photograph of Austin Window Cleaner with Bakan 3 Sprayer 513
31-A, Photograph of Austin Window Cleaner with Bakan 3 Sprayer-Overcap Removed 514
33, Photograph of Austin Window Cleaner—Earlier Package Without Sprayer 515
35, Summary of Sales by Austin (1957-1962) 516
90, Drawing of Bakan 2 Modified Sprayer 517

94, Chart #1—Fishleigh 519
110, Photomicrograph of Defendant's Exhibit 102 521
112, Photomicrograph of Defendant's Exhibit 104 522
114, Photomicrograph of Defendant's Exhibit 106 523
116, Photomicrograph of Defendant's Exhibit 108 524
118, Drawings Prepared from Defendant's Exhibits 110, 112, 114 and 116 525
120, Chart #2—Fishleigh 527
121, Letters Patent No. 2,956,509 to R. C. Cooprider and Douglas F. Corsette, October 18, 1960 529
150, Sketch of Boot for Sprayer 537
160, Memorandum by Davis (Calmar)—March, 1958 538
162, Memorandum by Davis (Calmar)—May, 1958 540
198, Notes on Calmar Development Committee Meeting, December 18, 1957 541
200, Memorandum—Wise to Department Heads, November 20, 1958 544
202, Memorandum by Wise to W. H. Harnage, March 31, 1958 550
210, Photograph of Scoggin Experimental Closure Cap 551
224, Chart #3, Fishleigh 553

	Original	Print
Proceedings in the United States Court of Appeals for the Eighth Circuit	555	555
Opinion, Mehaffy, J.	555	555
Judgment	565	564
Petition of appellants for rehearing en banc under this Court's Rule 15	566	565
Order denying petition of appellants for rehearing en banc	578	577
Order denying motion of appellants to recall and stay issuance of mandate	579	577
Clerk's certificate	580	578
Orders allowing certiorari	581	579

[1] COMPLAINT

(Filed in United States District Court April 27, 1959)

IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF MISSOURI, WESTERN DIVISION

CALMAR, INCORPORATED,
Plaintiff,
v.
COOK CHEMICAL COMPANY,
Defendant.

Civil Action No. 12349

1. Plaintiff, CALMAR, INCORPORATED, is a corporation of the State of California, having a place of business at Los Angeles, County of Los Angeles, State of California.

2. Defendant, COOK CHEMICAL COMPANY, is a corporation of the State of Missouri, having a place of business at Kansas City, County of Jackson, State of Missouri.

3. This is an action for Declaratory Judgment under Title 28, U.S.C., Section 2201, and the jurisdiction of this Court is predicated upon the Patent Laws of the United States of America.

[2] 4. This action arises from an actual justiciable controversy now existing between Plaintiff and Defendant with respect to the charge by Defendant of infringement by Plaintiff of the following United States Letters Patent, on information and belief owned by Defendant, and with respect to Plaintiff's denial of infringement and of the validity of said Letters Patent:

No. 2,870,943, in the name of Baxter I. Scoggin, Jr., patented January 27, 1959, for "Pump-Type Liquid Sprayer Having Hold-Down Cap".

5. Plaintiff has made and sold, and intends to continue to make and sell pump-type liquid sprayers having hold-down caps for dispensing liquids from containers.

6. Defendant has asserted, and Plaintiff has denied, that the manufacture, sale and use of the said liquid sprayers is an infringement of and is within the valid scope of the claims of the aforesaid Letters Patent, and Plaintiff has informed Defendant that said Letters Patent are invalid.

[3] WHEREFORE, Plaintiff prays:

1. That this Court grant and enter a judgment declaring that said United States Letters Patent No. 2,870,943 are invalid and void.

2. That this Court grant and enter a judgment declaring that said United States Letters Patent No. 2,870,943 are not infringed by Plaintiff.

3. That this Court grant and enter a judgment declaring that it is the right of Plaintiff to continue to make, use and sell its liquid sprayers without let or hindrance from Defendant, whether asserted against Plaintiff or against customers of Plaintiff.

4. That the costs of this action be assessed against Defendant.

5. That Plaintiff have such other and further relief as justice may require.

Morrison, Hecker, Buck, Cozad & Rogers
Attorneys for Plaintiff

Of Counsel:

Francis G. Cole
Watson, Cole, Grindle & Watson
815 - 15th Street, N.W.
Washington 5, D. C

[4] ANSWER TO COMPLAINT

(Filed in United States District Court on August 14, 1959)

COMES NOW Defendant, Cook Chemical Company, and for answer to the complaint states as follows:

1. Defendant admits the allegations of paragraphs 1 to 6 inclusive of the complaint

COUNTERCLAIM

As to its counterclaim, Defendant states:

2. That Defendant is a corporation of the State of Missouri, having a place of business at Kansas City, County of Jackson County, State of Missouri.

3. That Plaintiff, Calmar, Incorporated, is a corporation of the State of California, having a place of business at Los Angeles, County of Los Angeles, State of California, and is before this court as Petitioner in the complaint against Defendant.

4. That this court has jurisdiction of this counterclaim and of the parties because the cause arises under the patent laws of the United States, and U. S. Code, Title 28, Section 1338 (a); and Title 28, Section 1400 (b), as more fully hereinafter appears.

[5] 5. That United States Letters Patent No. 2,870,943 was duly and legally issued to Defendant on January 27, 1959, in the name of Baxter I. Scoggin, Jr., for a "PUMP-TYPE LIQUID SPRAYER HAVING HOLD-DOWN CAP", and that Defendant retains all rights and title to said patent.

6. That Defendant is informed and believes, and on information and belief alleges, that Plaintiff, within six years prior to the filing of this counterclaim, within the district of this court and elsewhere in the United States, infringed and is still infringing said patent by manufacturing, using and selling sprayers embodying the inventions patented by said Letters Patent unlawfully and without license from Defendant, and will continue to infringe unless enjoined by this court.

7. That Defendant is informed and believes, and upon information and belief alleges, that Plaintiff has committed the aforesaid acts of infringement in knowing, wanton and deliberate disregard of the rights of Defendant.

8. That Plaintiff had actual knowledge of said patent at the time of commencement of said acts of infringement.

WHEREFORE, Defendant prays:

1. That the complaint be dismissed with costs to Plaintiff.

2. That a judgment be entered that said patent is valid.

3. That a judgment be entered decreeing that Plaintiff infringes said patent.

[6] 4. That Plaintiff be ordered to account to Defendant for damages suffered by reason of the infringing acts herein complained of.

5. That Defendant have judgment against the Plaintiff for its reasonable attorneys' fees incurred in this action.

6. That Defendant have judgment against Plaintiff for the costs and disbursements incurred herein by Defendant.

7. That the Defendant have such further and other and different relief as this court may deem meet and proper.

Hovey, Schmidt, Johnson & Hovey
By Donald E. Johnson
1816 Federal Reserve Bank Bldg
Kansas City 6, Missouri
Attorneys for Defendant

[7] ANSWER TO COUNTERCLAIM

(Filed in United States District Court on August 20, 1959)

Plaintiff, Calmar, Incorporated, for answer to the counterclaim states:

1. Plaintiff reasserts that United States Letters Patent 2,870,943 are invalid and void and are not infringed by Plaintiff.

2-4. Plaintiff admits the allegations of paragraphs 2, 3, and 4 of the counterclaim.

5. Plaintiff denies that United States Letters Patent 2,870,943 were duly and legally issued, but admits that said Letters Patent were issued to Defendant on January 27, 1959, and that Defendant retains title thereto.

6-8. Plaintiff denies each and every allegation of paragraphs 6, 7, and 8 of the counterclaim.

[8] WHEREFORE, Plaintiff prays:

1. That the counterclaim be dismissed.

2. That Plaintiff have its costs and attorneys' fees and also such other and further relief as may be just.

Morrison, Hecker, Buck & Cozad
1701 Bryant Building
Kansas City 6, Missouri
Attorneys for Plaintiff

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[9] AMENDED ANSWER TO COUNTERCLAIM

(Filed in United States District Court on September 18, 1961)

Plaintiff, Calmar, Incorporated, for amended answer to the counterclaim states:

1. Plaintiff reasserts that United States Letters Patent 2,870,943 are invalid and void and are not infringed by plaintiff.

2-4. Plaintiff admits the allegations of paragraphs 2, 3 and 4 of the counterclaim.

5. Plaintiff denies that United States Letters Patent 2,870,943 were duly and legally issued, but admits that said Letters Patent were issued to Defendant on January 27, 1959, and that defendant retains title thereto.

6-8. Plaintiff denies each and every allegation of paragraphs 6, 7 and 8 of the counterclaim.

9. United States Letters Patent 2,870,943 are invalid and void for each of the following reasons:

1. (a) No invention was required to devise the alleged improvements described and claimed in said Letters Patent, in view of the state of the art, and the subject matter thereof was obvious to a person with ordinary skill in the art at the time the alleged invention of said Letters Patent was made.

[10] (b) The disclosure and claims of said Letters Patent are vague, indefinite, ambiguous, uncertain and incomplete, and are not in such clear, concise, and exact terms as to enable persons skilled in the art to make and use the alleged invention.

(c) The claims of said Letters Patent are not based on the disclosure of the application for Letters Patent as originally filed, and are invalid and void because of the overclaiming of the alleged invention.

(d) Patentee Baxter I. Scoggin, Jr. failed to make with respect to the claims of said Letters Patent the oath required by the Patent Act of 1952, 35 U.S.C. 115 and Rule 67 of the Rules of Practice of the United States Patent Office.

(e) The result produced by the association of elements described and claimed in said Letters Patent is not a product of the combination of said elements but is a mere aggregation of several effects, each and all of which several effects as well as the elements necessary for their production were matters of common knowledge among those skilled in the art to which said Letters Patent relate before the alleged invention thereof by said patentee and more than

one year prior to the date of the application for said Letters Patent and do not represent patentable combinations but only aggregations of old and well-known elements.

(f) The said Baxter I. Scoggin, Jr. was not the original and first inventor of the alleged improvements described and claimed therein, but the same, in all of their material and substantial parts, were invented by others, were known to and used by others, and were communicated to the said Baxter I. Scoggin, Jr. by others before his alleged invention and discovery thereof, [11] were patented and described in printed publications in this and foreign countries before his alleged invention or discovery thereof, and more than one year prior to his application for patent, and were in public use and on sale in this country for more than one year prior to his said application.

2. The patents and printed publications referred to, insofar as they have presently been ascertained, are as follows:

Number	Date	Patentee
U.S.P. 1,714,874	May 28, 1929	Hothersall
U.S.P. 2,024,570	December 17, 1935	Fischman
U.S.P. 2,119,884	June 7, 1938	Lohse
U.S.P. 2,362,080	November 7, 1944	Martin
U.S.P. 2,434,875	January 20, 1948	Turnbull et al
U.S.P. 2,568,057	September 18, 1951	Cotter
U.S.P. 2,586,687	February 19, 1952	Mellon
U.S.P. 2,684,182	July 20, 1954	Gey
U.S.P. 2,715,480	August 16, 1955	Livingstone
U.S.P. 2,763,402	September 18, 1956	Livingstone
U.S.P. 2,844,290	July 22, 1958	Slade
U.S.P. 2,846,124	August 5, 1958	Stewart et al
U.S.P. 2,861,839	November 25, 1958	Mellon
U.S.P. 2,956,509	October 18, 1960	Cooprider et al
British 737,210	Published September 21, 1955	Universal Metal Products, Ltd.

Modern Packaging October 1947, Vol. 2, No. 2 - Pages 126, 127.

3. The instances of prior invention, prior knowledge and use by others, and prior public use and sale, above referred to, insofar as they have been ascertained at present, are as follows:

(a) By the patentees of the patents and by the author of the publication set forth above, at the place set forth in the patents and publications listed therein, and elsewhere in the United States.

(b) By plaintiff and its affiliated companies and their officers and employees at Los Angeles, California, [12] and elsewhere in the United States.

(c) By Paul A. Marchant, a resident of Kansas City, Missouri, at Kansas City, Missouri.

(d) By others presently unknown to plaintiff whose names plaintiff asks leave to add to this answer when it shall have ascertained the same.

4. Plaintiff further avers that by reason of the proceedings in the United States Patent Office during the prosecution of the application which resulted in the Letters Patent in suit, and the admissions and representations made by or on behalf of the applicant in order to induce the grant of said Letters Patent, the defendant is estopped to claim for the Letters Patent in suit a construction such, were the same otherwise possible, as to cause it to cover any act of plaintiff.

5. The claims of said Letters Patent are ambiguous and if such ambiguity can and shall be truly, correctly and lawfully resolved by reference to the specification of said patent, the proceedings in the Patent Office leading to the grant of said patent, and to the art existing at and prior to the alleged invention of the subject matter of said claims by the said patentee, said claims and each of them will be legally susceptible only of such narrow interpretation, meaning and scope that no act done or intended to be done by plaintiff can justly and lawfully be held to constitute infringement of any of said claims.

WHEREFORE, plaintiff prays:

1. That the counterclaim be dismissed.

[13] 2. That plaintiff have its costs and attorneys' fees and also such other and further relief as may be just.

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[14]

COMPLAINT

(Filed in United States District Court on October 5, 1960)

IN THE UNITED STATES DISTRICT COURT FOR
THE WESTERN DISTRICT OF MISSOURI
WESTERN DIVISION

COLGATE-PALMOLIVE COMPANY, Plaintiff, v. COOK CHEMICAL COMPANY, Defendant.	Civil Action No. 13006

Plaintiff, complaining of defendant, respectfully alleges:

1. Plaintiff, COLGATE-PALMOLIVE COMPANY, is a corporation duly organized and existing under the laws of the State of Delaware, and has offices at New York City, in the County of New York and State of New York.

2. Defendant, COOK CHEMICAL COMPANY, is a corporation organized and existing under the laws of the

State of Missouri, having a place of business at Kansas City, County of Jackson and State of Missouri.

3. This is a suit brought for a declaratory judgment in reference to a United States patent under 28 U.S.C. Section 2201, and the jurisdiction of this court arises under the Patent Statutes of the United States and 28 U.S.C. Sections 1338 and 1391.

[15] 4. This action arises from an actual controversy now existing between plaintiff and defendant as to the alleged infringement by plaintiff of the United States Letters Patent No. 2,870,943, granted January 27, 1959, upon an application of Baxter I. Scoggin, Jr., for "Pump-Type Liquid Sprayer Having Hold-Down Cap."

5. Defendant has represented itself to be the owner of the entire right, title and interest in and to said Letters Patent.

6. Defendant has, by a letter dated August 3, 1960, a copy of which is hereto annexed and marked "Annex A," charged plaintiff with infringement of defendant's alleged rights under said Letters Patent by reason of plaintiff's use of plastic sprayers and dispensers in connection with plaintiff's "Kan-Kil" products which plaintiff has sold.

7. Plaintiff has purchased plastic sprayers and dispensers from Calmar, Inc., and has used them in connection with plaintiff's "Kan-Kil" products which plaintiff has sold, and intends to continue to purchase such plastic sprayers and dispensers from Calmar, Inc., and to continue to use them in connection with its "Kan-Kil" products which plaintiff intends to continue to sell.

8. Plaintiff denies that it has infringed said Letters Patent No. 2,870,943, or any rights of defendant thereunder by its use of the liquid sprayers and dispensers, which it has purchased from Calmar, Inc., in connection with plaintiff's "Kan-Kil" products, and its sale of said products, or otherwise.

[16] 9. Plaintiff alleges that said Letters Patent No. 2,870,943 are not good nor valid in law, and that the same are invalid and void.

10. Plaintiff has denied to defendant the existence of any liability on the part of plaintiff to defendant based on said Letters Patent 2,870,943, wherefore by reason of the notice of infringement which defendant has served on plaintiff, and the resulting commercial and financial uncertainty incident to the manufacture, use and sale by plaintiff of its accused products aforesaid, an actual controversy has arisen and exists at the present time between plaintiff and defendant.

WHEREFORE, Plaintiff prays:

1. That this Court grant and enter a judgment or decree declaring said United States Letters Patent No. 2,870,943 to be invalid and void.

2. That this Court grant and enter a judgment or decree declaring that the said Letters Patent No. 2,870,943 are not infringed by plaintiff.

3. That this Court grant and enter a judgment or decree declaring that it is the right of plaintiff to continue to make, use and sell products including sprayers and dispensers of the type and structure heretofore used and sold by it as set forth herein, without any threats or interference whatsoever by or from defendant, its assigns or successors in title to said Letters Patent, based on or arising out of the ownership of said Letters Patent or any interest therein, either directed against plaintiff or its suppliers or customers.

[17] 4. That defendant, its agents, officers and employees, temporarily during the pendency of this action and permanently after final hearing, be enjoined from charging or asserting as to plaintiff or its suppliers or its customers that the manufacture, use or sale of said sprayers and dispensers, either as such or as part of a product, is in violation of or infringes upon defendant's patent rights under said Letters Patent.

5. That the costs of this action be assessed against defendant.

6. That plaintiff have such other and further relief as justice may require.

/s/ Lathrop, Righter, Gordon & Parker
Attorney for Plaintiff
By /s/ Howard A. Crawford

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New York 22, New York
George H. Mortimer
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New York 22, New York

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[18] ANSWER TO COMPLAINT

(Filed in United States District Court on November 30, 1960)

COMES NOW defendant, Cook Chemical Company, and for answer to the complaint, states as follows:

1. Defendant admits the allegations of paragraphs 1 to 7 inclusive, of the Complaint.

2. Answering paragraph 8 of the Complaint, defendant alleges that plaintiff has infringed U. S. Letters Patent No. 2,870,943 by its use of liquid sprayers and dispensers which it has purchased from Calmar, Inc., in connection with plaintiff's "Kan-Kil" products, and its sale of said products and otherwise.

3. Answering paragraph 9 of the Complaint, defendant alleges that said Letters Patent No. 2,870,943, is good and valid in law.

4. Answering paragraph 10 of the Complaint, defendant alleges that plaintiff is liable to defendant for infringement

of said Letters Patent No. 2,870,943, but admits that an actual controversy has arisen and exists at the present time between plaintiff and defendant.

[19] COUNTERCLAIM AGAINST PLAINTIFF

For counterclaim against the plaintiff, Colgate-Palmolive Company, the defendant, Cook Chemical Company, says:

COUNT I

1. Defendant is a corporation of the State of Missouri having a place of business at Kansas City, County of Jackson, State of Missouri.

2. Plaintiff is a corporation of the State of Delaware, having a place of business at New York City in the County of New York, State of New York, and is before this Court as petitioner in the Complaint against defendant.

3. That this court has jurisdiction of this Counterclaim and of the parties because the cause arises under the patent laws of the United States, and U. S. Code, Title 28, Section 1338 (a); and Title 28, Section 1400 (b), as more fully hereinafter appears.

4. That United States Letters Patent No. 2,870,943, was duly and legally issued on January 27, 1959, to defendant as assignee, for a "PUMP-TYPE LIQUID SPRAYER HAVING HOLD-DOWN CAP", and that defendant retains all rights and title to said patent.

5. That defendant is informed and believes, and on information and belief alleges, that plaintiff, within six (6) years prior to the filing of this Counterclaim, within the District of this court and elsewhere in the United States, infringed and is still infringing said patent by manufacturing, using and/or selling sprayers embodying the inventions patented by said Letters Patent unlawfully and without license from defendant, and will continue to infringe unless enjoined by this court.

[20] 6. That defendant is informed and believes, and upon information and belief alleges, that plaintiff has committed

the aforesaid acts of infringement in knowing, wanton and deliberate disregard of the rights of defendant.

7. That plaintiff had actual knowledge of said patent at the time of issuance thereof and during the commission of said acts of infringement.

---

[21] PLAINTIFF'S REPLY TO DEFENDANT'S COUNTERCLAIM

(Filed in United States District Court on February 18, 1961)

I

Comes now plaintiff Colgate-Palmolive Company and for its reply to Count I of defendant's counterclaim, alleges and states:

FIRST DEFENSE

Said Count I fails to state a claim against plaintiff upon which relief can be granted.

SECOND DEFENSE

1. Plaintiff admits the allegations of paragraphs 1, 2, and 3 of Count I of defendant's counterclaim.

2. Plaintiff denies each and every allegation of paragraphs 4, 5, 6, and 7 of Count II of defendant's counterclaim.

WHEREFORE, plaintiff prays:

1. That Count I of said counterclaim be dismissed.

2. That plaintiff have and recover its costs and attorneys' fees and also for such other and further relief as may to the Court seem just and proper.

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[22] ORDER SUSTAINING MOTION TO CONSOLIDATE THE CASE OF CALMAR, INCORPORATED vs COOK CHEMICAL COMPANY, NO. 12349 WITH THE FIRST COUNT OF THE CASE OF COLGATE-PALMOLIVE vs COOK CHEMICAL COMPANY, No. 13006.

(Filed in United States District Court on December 28, 1961)

IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF MISSOURI
WESTERN DIVISION

CALMAR, INCORPORATED, Plaintiff, v. COOK CHEMICAL COMPANY, Defendant.	No. 12349
COLGATE-PALMOLIVE COMPANY, Plaintiff, v. COOK CHEMICAL COMPANY, Defendant.	No. 13006

Defendant's Motion to Consolidate the above entitled causes coming on for consideration, is by the court sustained, and the case of Calmar, Incorporated vs Cook Chemical Company, No. 12349, is consolidated with the first count of the case of Colgate-Palmolive Company vs Cook Chemical Company, No. 13006, for the purposes of trial.

A trial upon the issues raised in the remaining counts of the case of Colgate-Palmolive Company vs Cook Chemical Company, No. 13006, will be deferred until the question of the validity of the patent involved in the cases has been determined.

[23] The cases are hereby set for trial on Monday, March 5, 1962, upon the issues involved in the consolidated cases.

Richard M. Duncan
Judge

Dated: December 28, 1961

[24] ORDER ADMITTING INTO EVIDENCE PLAINTIFF'S EXHIBITS ZZ AND AAA.

(Filed in United States District Court on April 4, 1962)

Come now the attorneys for plaintiffs in the above action and present to the Court their Motion for an order reopening the hearing in the above case and confirming admission of evidence, and it appearing that defendant agrees to the granting of said motion and that all parties to the above action agree that the Stipulations attached to plaintiffs' Motion and marked Plaintiffs' Exhibits ZZ and AAA should be in evidence and were treated and referred to by the parties and the Court as a part of the trial record at the time evidence was being presented to the Court; and it further appearing to the Court that the said Stipulations became a part of the record upon being filed with the Clerk of the Court but that it may be desirable to confirm that the said Stipulations are in evidence and are a part of the trial record in this matter;

[25] THEREFORE, it is hereby ordered as follows:

1. That the trial of the above matter is reopened solely for the purpose of confirming the admittance of Stipulations marked Exhibits ZZ and AAA into evidence;

2. That said Stipulation marked Plaintiffs' Exhibit ZZ be admitted into evidence as Plaintiffs' Exhibit ZZ and is a part of the trial record of this matter;

3. That said Stipulation attached to plaintiffs' Motion and marked Plaintiffs' Exhibit AAA be admitted into evidence as Plaintiffs' Exhibit AAA and is a part of the trial record of this matter.

R. M. Duncan
District Judge

Approved:

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[26] MEMORANDUM OPINION, FINDINGS OF FACT, AND CONCLUSIONS OF LAW.

(Filed in United States District Court on June 19, 1963)

IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF MISSOURI
WESTERN DIVISION

CALMAR, INCORPORATED, Plaintiff, v. COOK CHEMICAL COMPANY, Defendant.	No. 12349-3
COLGATE-PALMOLIVE COMPANY, Plaintiff, v. COOK CHEMICAL COMPANY, Defendant.	No. 13006-3

This is a declaratory judgment action instituted by the plaintiff, Calmar, Incorporated, against the defendant Cook

Chemical Company, asking this court to declare that U. S. Patent No. 2,870,943 issued to Baxter I. Scoggin, Jr., on January 27, 1959, and presently owned by defendant Cook Chemical Company is invalid and not infringed by plaintiffs.

A similar declaratory judgment action was brought by the plaintiff Colgate-Palmolive Company against defendant Cook Chemical Company asking for the same judicial determination relative to the Scoggin patent.

[27] In its answers, defendant admitted the jurisdiction of this court, and the existence of a justiciable controversy. The defendant also counterclaimed in each action, seeking a declaration of validity of its patent and a finding of infringement by plaintiffs' commercial device.

In the Colgate-Cook case, the defendant's counterclaim also alleged unfair competition as well as infringement on the part of Colgate. The two actions were consolidated for trial on the issues of validity and infringement only. Trial of the unfair competition issue raised in Cook's counterclaim against Colgate was deferred pending a determination of the issues of validity and infringement.

The patent involves a pump spray device designed to be inserted into bottles or other containers for the dispensing of liquid contained therein. The particular device with which we are concerned here, is a screw cap designed to hold down the plunger of said spray pump when it is inserted in a bottle so as to prevent leakage and breakage while being shipped from processor, or while on the shelves of stores where such commodities are offered for sale.

The sprayers which were manufactured by Calmar and later by Bakan, were used by defendant prior to the Scoggin patent, was a simple device made of rigid plastic. It consisted of seven separate elements; (1) a chamber approximately 1-3/4" long, and 1/2" in diameter; (2) a disk was sealed to the top [28] of this element with an opening therein corresponding in size to the opening in the chamber. The lower end of the chamber was formed into a bottle neck design, and the opening at the end thereof was smaller than the opening in the top of the chamber.

Into this opening was inserted (3) a plastic barrel of sufficient length to extend to the bottom of the container.

The disk at the top of the chamber was so designed and sized as to enable it to be secured to the inside of the threaded container cap of metal or plastic material. The container cap possessed an opening in the top surface to correspond to the opening in the disk and chamber itself.

(4) A collar smaller than the container cap with an opening therein corresponding in size to the openings in the chamber and disk and the container cap was secured to the top of the container cap. This collar extended slightly above the container cap.

(5) A small coil spring was inserted into the chamber and rested upon the shoulder created in the sides of the opening near the lower end thereof.

(6) A plunger approximately 2″ long was inserted into the chamber through the openings in the collar and the container cap to contact the coil spring therein. Upon the top of this plunger was secured the (7) sprayer head containing an orifice through which the fluid was expelled. [29] The top of the sprayer head was formed into a "saddle" to accommodate a finger or thumb of the hand. Thus assembled, the sprayer pump was inserted into the bottle and secured thereto by means of the threaded cap. When the plunger was actuated by being pressed downward by the finger or thumb, the fluid in the container was drawn through the barrel and chamber and forced through the orifice in the form of spray. When the sprayer was attached to the container, the plunger and sprayer head projected about 1-1/2″ above the top of the container.

Defendant Cook Chemical has been engaged in the manufacture and sale of household insecticides since 1945, and sold its product under the trade name, "Real Kill". Prior to 1954, the insecticide industry largely was made up of a number of small packagers scattered throughout the country.

Plaintiff Colgate was in the market prior to 1958 with 6 and 12 ounce Aersol cans, but did not enter the household insecticide market with a package including pump sprayer until 1958, when it came into the market with "Kan Kill" which immediately came into competition with defendant's product, "Real Kill".

Prior to the patented sprayer coming on the market in 1957, most of the manufacturers and distributors of household insecticide chemicals used the type sprayer which has heretofore been described, and attached it to their bottles [30] or containers by means of pasteboard or plastic holder. This was necessary as the products could not be successfully handled with the sprayer in place, due not only to breakage but leakage in shipment and while the bottles were on the shelves of the merchants before sale.

With respect to insecticides, the evidence reveals that the chemicals used by the parties in the manufacture of these products caused the material to be extremely fluid and susceptible to leakage. Due to this, a much tighter seal was required for them than for starch, wave set, leaf polish and moth spray. The container when in shipment or displayed for sale had a separate cap which was removed by the purchaser who then inserted the sprayer.

This practice had also presented problems of breakage and handling to the manufacturers and merchandisers as the sprayers were occasionally damaged or lost. This condition continued to plague the manufacturers of the sprayer and sellers of insecticides particularly, during all of the period prior to the Scoggin invention.

Defendant purchased sprayers for its products from plaintiff and some time prior to 1956, had urged upon Calmar the desirability of making a shipping sprayer that could be put in place before shipment. As early as 1951-'52 Calmar made what has been referred to in the evidence as its SS 25 LP, the head of which, when depressed and turned, would lock into the collar attached to the container cap.

[31] It did not prove to be satisfactory, and did not get far beyond the experimental stage. It leaked down the stem and did not solve the breakage problem. (Deft. Ex. 26). During this period plaintiffs had expended considerable time, effort and money in an attempt to develop a successful shipper-sprayer, but had not met with any substantial success.

In 1956 the defendant organized a company known as "Bakan" and began the manufacture of its own sprayers. Sprayers were not a patented device, and defendant's sprayer did not differ from the Calmar sprayer.

Between the time the defendant began to manufacture its own sprayers in 1956, and March 4, 1957, the patentee, B. I. Scoggin, Jr., devoted his time trying to find a solution to the problem of leakage and breakage. His efforts finally culminated in the patent that is now in dispute. The application therefor was filed on the above date. It was a simple device, but apparently solved the problem of breakage in shipping and leakage.

In his patent Scoggin utilized the Bakan sprayers which were currently being manufactured by it. The only structural change made in the sprayer was to redesign the collar attached to the container cap so as to form the lower portion of the inner seal and to provide threads around the collar to conform to the threads in the hold-down cap. By securing the hold-down cap to the collar the sprayer head was caused to be [32] depressed and covered, and thus shielded from breakage. An inner seal was also formed between the hold-down cap and the collar which prevented leakage.

In his specifications, patentee described his invention as follows:

"Pump-Type liquid sprayer having hold-down cap."

"DESIGNATION OF PATENT"

"This invention relates to improvements in structures for dispensing liquids wherein is provided a spray-type hand pump mounted within a container for the liquid through use of the closure cap of such container.

It is common practice, as exemplified for example by Patent No. 2,362,080, issued November 7, 1944, to dispense various types of liquids such as insecticides, through use of a finger manipulated spray pump normally sold as a component part of the container itself. The pump includes a vertically reciprocable plunger extending upwardly beyond the top of the cap within which the pump is mounted and provided with a spray head or nozzle structure capable of emitting a fine mist-like spray when the plunger is depressed by engagement with a finger receiving saddle forming a part of the spray head.

Difficulties have been experienced in the field by virtue of the inherent nature of such structure since accidental actuation of the plunger causes dispensing of the fluid and oftentimes the material is used in part by store employees prior to sale because of the ready accessibility to the pump itself.

It is the most important object of the present invention, therefore, to provide structure for rendering the pump inoperable during shipment and while in storage, as well as on the shelves of the retail dealer.

Another important object of the present invention is to provide structure capable of carrying out the functions above set forth which is also adapted to enclose the head of the plunger and thereby protect the same, as well as handlers of the merchandise by virtue of the fact that the said plunger is completely enclosed and held at the innermost end of its reciprocable path of travel."

[33] The Patentee claimed for his patent in Claims 1 and 2:

"1. In a closure assembly for an open-top container having a perforated cap over said open top thereof mounting a spray unit including a barrel provided with a tubular extension passing coaxially upwardly through the perforation in said cap, a plunger reciprocably carried by the barrel and normally extending therebeyond and a spray head on the upper end of the plunger above said extension, the combination with said spray unit of an annular retainer telescoped over and secured to the extension above said cap and provided with external, circumferentially disposed screw threads and an annular, continuous segment at the upper part of the retainer above said screw threads, and a cup-shaped hold-down member housing the head and holding the plunger depressed at substantially the innermost path of travel thereof within the barrel, said member being provided with internal screw threads complementally engaging said screw threads on the retainer and having an internal, circumferentially extending, continuous shoulder disposed to engage said segment around the entire periphery thereof and thereby present a liquid-tight seal located between the spray head and said threads on the retainer

and said member respectively, said shoulder being spaced from the lower annular peripheral edge of the member a distance at least slightly less than the distance from that portion of said segment normally engaged by said shoulder, to the proximal upper surface of the cap whereby said lower edge of the member is maintained out of contacting relationship with the cap when the member is on the retainer in a position with said shoulder in tight sealing engagement with the segment.

2. A closure assembly as set forth in claim 1 wherein one of the normally interengaged surfaces of the shoulder and segment respectively is substantially conical to present an inclined annular face coaxial with the member and said retainer and of sufficient diameter at the largest end thereof to cause the seal effected between the shoulder and said segment to become tighter as the shoulder slides on said segment during shifting of the member toward the cap."

The purpose of the Scoggin patent is that of converting the old side-mounted sprayer into a shipper sprayer. In order to achieve this end, two things had to be accomplished. [34] First, the sprayer head and plunger had to be protected from damage. Second, the unit had to be sealed to prevent leakage of the contents. To achieve this the collar on the top of the container cap was modified and the hold-down cap was added.

To the existing collar two new elements were added. First, screw threads were added to the side so that they would engage those on the inside of the hold-down cap. Secondly, a circular rib or lip around the top of the collar was added to establish a seal with a complementary lip inside the hold-down cap.

The hold-down cap included first, internal screw threads which would engage those added to the side of the collar, and secondly, a circular inner shoulder which would engage the rib or lip added to the top of the collar. Finally, the cap was constructed so that when screwed into place on the collar it would depress the sprayer, completely enclosing it, providing the required protection. A space is provided between the lower surface of the hold-down cap

and the container cap so that there is no contact between such surfaces.

The rib on the collar and the shoulder in the cap provide the seal. The threads on the side of the collar and those inside the cap serve to secure the cap to the collar, thus enclosing, depressing and protecting the sprayer. With the cover cap secured to the collar, any forces applied to the cap would be transmitted to the collar and not to the sprayer head and the plunger.

[35] Defendant's patent is limited to the combination of the old sprayer with these modifications and additions.

The file wrapper reveals that numerous claims were filed, denied, cancelled and amended before Claims 1 and 2, among others, were finally allowed.

The defendant began to manufacture sprayers embodying its invention in 1956, and at first it encountered some difficulty with leakage at the seal. Some modifications were made in the structure, and the evidence clearly and unequivocally reveals that thereafter the problems, both of leakage and breakage were solved. It immediately enjoyed trade and customer acceptance and its commercial success was assured. The defendant's product with sprayer inside of the container was then for the first time marketed as an integrated unit.

The hold-down cap on defendant's sprayer was screwed to the collar by the assembling machinery at the time of manufacture. This depressed the spray head and established the seal. When the products were bottled the sprayer was inserted and screwed down onto the top of the container. The merchandise was then ready for shipment. In following this procedure the seal formed by the collar and cap were unbroken between the time of final assembly of the sprayer and the first use by the ultimate customer.

[36] Thus Bakan had produced a sealed and protected sprayer unit which the manufacturer need only screw onto the top of its container in much the same fashion as a simple metal cap.

Plaintiffs' contention is that defendant's claims lack invention, and that every element of the claims in suit is disclosed in the prior art, and that every combination or sub-combination recited in the claims can be found in the

prior art. Plaintiffs also deny that either Calmar's patent or the accused device infringes.

§103, Title 35, U. S. C. A. provides:

> "A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made."

Therefore, the question is—was the combination of the admittedly old and known elements employed by Scoggin in accomplishing the result which he set out to achieve, invention, or was it merely the result of mechanical skill?

At first glance the mere simplicity of the idea would seem to present a very close question, but it must be remembered that we are dealing with a situation that had long given trouble to those who were engaged in that business, and who were familiar with the problem and art.

[37] The manufacturers of sprayers had not been able to solve the problem of leakage and breakage in the shipment of the products with which their spray pumps were used. Numerous ideas had been suggested by Calmar, the experiments were made, but none of them solved the problem. These facts and circumstances certainly must lead us to seriously doubt that it was so simple a mechanical problem as it seems now that it has been solved. However, simplicity and obviousness after the event do not negative invention. *Goodyear Co.* v. *Ray-O-Vac Co.*, 321 U. S. 275 and cases cited in note 4, p. 279.

Now that it has been solved, one trained in mechanics and in the art might say, "Well, that was a very simple problem and should easily have been solved", but the fact that many people were thinking about and working on it, and were unable to come up with the answer, raises it above the principle of mere simplicity. Hindsight is generally 20-20.

When the application was before the Patent Office, there were five patents cited, including Lohse, June 7, 1938, No. 2,119,884. Plaintiffs have cited two others that were not before the examiner.

Certainly there is nothing new about the use of hold-down caps on bottles. The Lohse patent which employed a hold-down cap, was dated in 1938, but the evidence reveals that it was not commercial at that time, has not been in use for many years. Lohse's cap would not solve the problem that was faced by the manufacturers and sellers of insecticides.

[38] It is true that Lohse's cap contained threads therein which corresponded to threads on a collar above the container cap, just as there are threads on the collar of the sprayer with which we are concerned here. But, the bottom or the skirt of the cap in Lohse forms a seal with a gasket of some substance, apparently leather, which rests on the upper surface of the container cap. There are no seals above the threads and below the sprayer head. This form of contact between the end of the hold-down cap and the top of the container would not solve the problem of leakage.

There is no thought or contention in this case about there being anything novel or new about the hold-down cap or the threads therein corresponding to the threads on the collar. In defendant's teachings and in its claim it is provided that:

> "* * * *said shoulder being spaced from the lower annular peripheral edge of the member a distance at least slightly less than the distance from that portion* of said segment normally engaged by said shoulder, to the proximal upper surface of the cap whereby said *lower edge of the member is maintained out of contacting relationship with the cap when the member is on the retainer in a position with said shoulder in tight sealing engagement with the segment.*" (Emphasis supplied)

Much has been said by the plaintiffs about this language in the claim and they insist that such a space is not invention. In simple language, all that is meant by this rather complicated language is that there is a space between the

lower edge of the hold-down cap and the container cap in order to permit [39] the hold-down cap to be screwed down on the collar and form a solid seal between the inner shoulder of the collar and the inner groove of the cap. Certainly without a space so described, there could be no inner seal within the cap, but such a space is not new or novel, but it is necessary to the formation of the seal within the hold-down cap.

To me this language is descriptive of an element of the patent but not a part of the invention. It is too simple, really, to require much discussion. In this device the hold-down cap was intended to perform two functions—to hold down the sprayer head and to form a solid tight seal between the shoulder and the collar below. In assembling the element it is necessary to provide this space in order to form the seal.

A patent shall be presumed valid. The burden of establishing invalidity of a patent shall rest on a party asserting it. 35 U. S. C. A. §282. The Supreme Court applied this statutory rule in *Mumm* v. *Decker & Sons*, 301 U. S. 168, where it said:

> " 'For the grant of letters patent is *prima facie* evidence that the patentee is the first inventor of the device described in the letters patent and of its novelty. Smith v. Goodyear Dental Vulcanite Co.. 93 U. S. 486; Lehnbeuter v. Holthaus, 105 U. S. 94'. The issue of the patent is enough to show, until the contrary appears, that all the conditions under which a discovery is patentable in accordance with the statutes have been met. Hence, the burden of proving want of novelty is upon him who avers it. Walker on Patents, §116. Not only is the burden to make good this defense upon the party [40] setting it up, but his burden is a heavy one, as it has been held that 'every reasonable doubt should be resolved against him.' Id., Cantrell v. Wallick, supra; Coffin v. Ogden, 18 Wall 120, 124; Barbed Wire Patent, 143 U. S. 275, 284, 285; Adamson v. Gilliland, 242 U. S. 350, 353." (171)

In *Ezee Stone Cutter Mfg. Co.* v. *Southwest Indus. Prod.*, 262 F.2d 183 (C.A. 8, 1958), our own Eighth Circuit

Court of Appeals quoted *Long* v. *Arkansas Foundary Co.*, 247 F.2d 366, 369 (C.A. 8, 1957):

> " 'The issuance of a patent is prima facie evidence of both novelty and utility (see 35 U.S.C.A. §282), and when one attacks a patent he must make good his attack with reasonable clearness. He has the burden of proof, and every reasonable doubt will be resolved against him. Doner v. Sheer Pharmacal Corporation, 8 Cir., 1933, 64 F.2d 217, 221, and cases cited; G. H. Packwood Mfg. Co. v. Louis Janitor Supply Co., 8 Cir., 1941, 115 F.2d 958, 964, 965.
>
> In a case where the patentability of a claimed invention is in issue, evidence of commercial success is admissible and may be forthcoming. In a doubtful case such evidence may turn the scale in favor of the plaintiff. See Donner v. Sheer Pharmacal Corporation, supra, at page 221 of 64 F.2d and cases cited.
>
> In such a case, evidence that the patent device or combination solved a long-felt want and an old problem which had baffled those skilled in the art is also admissible. [Citing cases]' "

As heretofore stated, defendant's patented device met with substantial and extensive commercial success. This is evidenced by the fact that Calmar almost immediately set out to produce an equally successful shipper-sprayer. Commercial success or acceptance is an element that may be taken into consideration [41] in determining the question of invention, but is not necessarily determinative of the issue. *Temco Elec. Motor Co.* v. *Apeco Mfg. Co.*, 275 U. S. 319; *Forestek Plating & Mfg. Co.* v. *Knapp-Monarch Co.*, 106 F.2d 554 (C.A. 6, 1939); *Ezee Stone Cutter Mfg. Co.* v. *Southwest Indus. Prod., supra.*

Another question for determination here is whether or not defendant's invention solved the problem of leakage or breakage in shipment. Unquestionably it did. That is best exemplified by the fact that the plaintiffs adopted and used a device with a seal within the cap almost exactly like that used by the defendant. Thus it meets one of the requirements necessary to an invention, it was useful.

Was it new? The fact that a patent may be composed of old and well known elements, if it performs a new and

useful purpose does not destroy invention. *Parks* v. *Booth*, 102 U. S. 96; *Loom Co.* v. *Higgins*, 105 U. S. 580. As a matter of fact, most of the mechanical patents that come to our attention now are a combination of old and well known elements into new form or composition.

Although hold-down caps had been used for many years, their use on the sprayer was for a special and limited purpose. It was employed in a narrow art, one pertaining primarily to the sealing, shipping and use of insecticides by means of liquefying sprayers.

[42] Several years of study and experimentations had been spent in an attempt to solve this problem; designs had been submitted to the manufacturers and sellers of insecticides. None had been satisfactory. May it not then be said that the design of a sealing element or joint that solved the problem, although it was simple, would be new? Certainly it was new in the art which the problem presented.

By the same reasoning, may it not also be said that if it solved a long-sought need, it was likewise novel? If it meets the requirements of being new, novel and useful it was the subject of invention, although it may have been a short step, nevertheless it was the last step that ended the journey. The last step is the one that wins and he who takes it when others could not, is entitled to patent protection. *The Barbed Wire Patent*, 143 U. S. 275.

It is my conclusion that the defendant's patent is valid.

Following the introduction into the market of its Bakan 2 sprayer pump, the pressure upon Calmar from its customers to produce a better shipper pump than it had theretofore been able to supply, became acute. Calmar's president testified that either he or some member of his organization had seen the Bakan 2 sprayer when it came upon the market in the fall of 1957.

[43] In the early part of 1958, Calmar employed Douglas F. Corsette, who, at the time he testified in this case, was vice-president in charge of engineering and development for Calmar. He had Bachelor and Masters degrees in engineering from Purdue University. Immediately prior to the time he was employed by Calmar he had been in the employ of a company engaged in the construction of an automatic assembly machine for sprayer devices.

In the early part of 1958, he was given the special assignment of designing a sprayer that would meet Calmar's customer requirements. These requirements apparently specified something comparable to that which had been produced by Bakan.

As a result of their study and experiments, Douglas F. Corsette and Rex C. Cooprider produced the accused device and filed an application for a patent on September 9, 1958, which was granted October 18, 1960. While the validity of the Corsette-Cooprider patent is not in issue here, I think for the purpose of understanding plaintiffs' commercial device, it may be well to describe it.

The patent was assigned by Corsette and Cooprider to the Drackett Company of Cincinnati, Ohio. The Drackett Company acquired Calmar, Inc., and Calmar Company was thereafter organized as the sales agency for Drackett Company. The question of the identity and relationship of the respective companies was settled before trial by stipulation of the parties.

[44] The application is entitled, "Fluid Dispensing Pumps" and it stated:

> "This invention relates to new and improved fluid dispensing pumps of the class in which the pump plunger is immobilized in a predetermined position for packing and shipping purposes to avoid inadvertent actuation and discharge of the liquid contents of a container to which such a pump may be applied.
>
> In liquid dispensing pumps adapted for application to and sale with containers for various commercially dispensed liquids, it has been heretofore known, as exemplified by the Lohse U. S. Patent 2,119,884, to utilize a protective cover for immobilizing the pump plunger in a predetermined depressed condition and also for trapping and retaining any liquid that may be inadvertently discharged from the pump. * * * It has been found, however, that in practice a very appreciable amount of liquid may be discharged into such a protective cap due to inversion of the container and/or expansion of its contents. In such case, the liquid may escape either through the usual liquid discharge passage of the plunger and the

plunger head, or between the plunger and the barrel in which it works.

(* * * this is the same patent which was referred to in Scoggin).

It is, accordingly, a primary object of the present invention to provide an improved form of fluid dispensing pump having means for retaining the plunger in immobilized position and including additional means rendered operative by immobilization of the plunger for closing off the plunger discharge passage and at the same time providing a fluid seal or block preventing egress of the liquid between the pump plunger and its associated barrel.

The preferred means for retaining the plunger thus immobilized is a protective hold-down cap which is threaded or otherwise secured to the container over the plunger head to depress the plunger to its immobilized position against spring pressure.

The invention further contemplates that the discharge opening or orifice of the plunger head will be surrounded by a frusto-conical sealing surface for cooperation with a similar frusto-conical interior surface [45] of the protective cap whereby to prevent discharge of fluid from the plunger head into the cap incident to application of the cap and depression of the plunger to its immobilized position, as well as subsequent thereto."

(This designated frusto-conical sealing surface or cap is the same cap that is referred to in Calmar's SS 25 and 40).

The description of plaintiff's patented device is quite lengthy and requires 5-1/2 pages of soft copy.

Calmar's specifications then proceeded to describe the sprayer pump and certain improvements made thereto for the purpose of preventing the fluid from escaping into the cap when the plunger or head of the sprayer head is depressed. With that particular description I am not concerned. because it is not that element of plaintiffs' commercial device which is alleged infringed. The description of this element of plaintiffs' patented device is designated as a "Primary Seal", whereas that portion of plaintiffs'

device with which we are concerned, is contained within the hold-down cap and collar.

There is also fully described in plaintiffs' specifications what we have been referring to as the seal between the threads on the collar attached to the container cap and the top of the hold-down cap. The specifications are spelled out in great detail. Significant of this language, I quote the following:

> "In order to effect a liquid tight sealing engagement between the cap and the collar, the collar is formed with an upwardly presented groove inwardly of its threaded outer wall for reception of a depending annular sealing ring on the cap. The dimensions of the groove and sealing ring are so related that the sealing ring preferably makes a jamming fit into the groove.
>
> [46] It is preferred that the cap be of resilient material in order that its conical interior sealing surface may form a fluid tight sealing engagement with the conical peripheral surface of the spray head and also so that its sealing ring may form a yielding fluid tight fit within the groove.
>
> Where the cap is thus formed of resilient plastic, however, it is subject to the usual and known difficulty that excessive tightening of the cap, as by automatic capping mechanism, may tend to expand the lower edge of the cap skirt so that the threads of the cap will override and become disengaged from the threads on the collar. However, the depending ring or skirt in addition to performing its sealing function, will resist such expansion tendency and thus adapt the resilient material caps for efficient application by automatic capping mechanism."

There are twenty claims in Calmar's invention. Its Claim 11 is particularly significant:

> "In a fluid dispensing pump, the combination with a generally vertical cylindrical pump barrel having at its upper end a collar having threads thereon, of a plunger reciprocally disposed in said barrel and having at its upper end and above said collar a discharge head having a discharge orifice for fluid, spring means acting between said barrel and plunger for urging said plunger

upwardly in said barrel, a check valve associated with said barrel to prevent downward movement of fluid therein, said plunger being forced to provide a discharge passage extending therethrough and communicating with said discharge orifice, a protective cap dimensioned to embrace said discharge head, said cap having a skirt for engagement with the threads on said collar to hold said plunger in a depressed and immobilized position against the action of said spring means, coacting sealing surfaces on said plunger and collar, said sealing surfaces being engaged when said cap is threaded on said collar to seal said barrel to prevent leakage externally of said plunger, means operable when said plunger is depressed and immobilized to seal said discharge passage to prevent leakage internally of said plunger, said last named means comprising a sealing ring surrounding said discharge orifice and having a contour conforming with the contour of the interior surface of said cap and positioned for sealing engagement with said cap in the depressed and immobilized position of said plunger, and coacting sealing surfaces on said cap and collar to contain within said cap liquid escaping from a defective seal either externally or internally of said plunger."

[47] Stripped of the technical language, if I correctly understand the teaching of the Calmar patent, it simply means it has made some improvements in its old basic sprayer by providing seals within the structure of the sprayer thus preventing the escape of fluid when it is in a depressed position.

The accused device is the Calmar SS-40. It conforms in almost all respects to the Corsette-Cooprider patent. As I have said, it contains modifications of the basic sprayer in addition to the hold-down cap and collar elements which are alleged to infringe defendant's patent. These modifications are not in issue here, and it is only the problem solving combination of the collar to cap seal and the hold-down cap that is alleged to infringe.

Specifically, the Calmar seal is formed by a circumferential groove in the top of the collar secured to the container cap and a tongue or projection formed in the hold-down cap to conform to the groove in the collar, so

that when the hold-down cap is screwed down on the collar, the upper tongue is pressed into the lower groove, thus forming a seal. This, in plaintiffs' evidence, is designated a "secondary" seal; also as a "labyrinth" seal, and differs from Scoggin's, which described a square shoulder which comes in contact with the projection or tongue circumferentially formed around the collar.

[48] In the Scoggin patent it may be said that there are three contacting surfaces formed by a union of the above shoulder and the below projecting tongue, whereas in the plaintiffs' accused device, there seems to be four contacting surfaces that are comparable to ordinary tongue-and-groove hardwood flooring.

We may assume, as an ordinary principle of mechanics, that if tongue and grooved objects are precisely scaled, when they are put together, they will form a perfectly tight union; the tongue and groove conforming exactly to each other's dimensions and the outer portions of the groove being perfectly dimensioned to the outer edges or portions of the tongue will likewise form a perfect union, and all coming in contact without any space in any area.

That is not true, I believe with either defendant's patent or plaintiffs' accused device. This may be attributed to manufacturing imperfections and to the type of material used, as it is pliable and subject to distortion under pressure. This characteristic of the material is, to a great degree, responsible for the establishment of the seal.

So far as outward appearances are concerned, plaintiffs' accused device and defendant's patented device are identical, and it is necessary to make a close inspection of the inner portions of the hold-down caps to determine the precise form of the seals.

[49] Structurally, the only significant difference between the collars and hold-down caps of defendant's patent and plaintiffs' accused device is the provision for the shoulder and tongue on defendant's, and the labyrinth on plaintiffs.

Infringement is a question of fact. *Stilz* v. *U. S.*, 269 U. S. 144, *Graver Tank and Mfg. Co. et al.* v. *Linde Air Products Co.*, 339 U. S. 605. The burden of proof is on the party alleging infringement. *Cammeyer* v. *Newton*, 94 U. S. 225, *Bene* v. *Jeantet*, 129 U. S. 683. The test of in-

fringement was set out by the Supreme Court in *Sanitary Refrigeration Co.* v. *Winters,* 280 U. S. 30, at 41-42 where it said:

> "There is substantial identity constituting infringement, where a device is a copy of the thing described by the patentee 'either without variation, or with such variations as are consistent with its being the same thing' *Burr* v. *Duryee,* 1 Wall 531, 537. * * * Generally speaking, one device is an infringement of another 'if it performs substantially the same function in substantially the same way to obtain the same result.' * * * Authorities concur that the substantial equivalent of a thing, in the sense of the patent law, is the same as the thing itself; so that if two devices do the same work in substantially the same way and accomplish substantially the same result, they are the same even though they differ in name, form or shape.' "

Plaintiffs' commercial device, insofar as the sealing in the hold-down cap and the protection of the sprayer head are concerned, perform the same function in substantially the same manner performed by defendant's.

Upon a close inspection of the devices, it is difficult to see how they could be much more similar and yet have any different features.

[50] IT IS THEREFORE my conclusion that plaintiffs' commercial device infringes Claims 1 and 2 of defendant's patent.

Richard M. Duncan
Judge

Dated: June 19, 1963

The parties hereto may submit form of Judgment Entry in accordance herewith within fifteen days.

[51] JUDGMENT

Executed by Judge Duncan
July 31, 1963

IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF MISSOURI
WESTERN DIVISION

CALMAR, INCORPORATED,
Plaintiff
v.
COOK CHEMICAL COMPANY,
Defendant
No. 12349-3

COLGATE-PALMOLIVE COMPANY,
Plaintiff
v.
COOK CHEMICAL COMPANY,
Defendant
No. 13006-3

The above entitled actions having been consolidated for trial on the issues of validity and infringement of U. S. Letters Patent No. 2,870,943, and having come on to be heard before the court upon the pleadings, including the complaints and defendant's answers and counterclaims, witnesses having been heard in open court, evidence having been presented, briefs having been filed in behalf of the respective parties, the causes having been fully tried before the court, and the court having entered "MEMORANDUM OPINION, FINDINGS OF FACTS, AND CONCLUSIONS OF LAW" dated June 19, 1963, it is now ORDERED, ADJUDGED, AND DECREED as follows:

1. That Cook Chemical Company, defendant, is the owner of United States Letters Patent No. 2,870,943, issued to it on the twenty-seventh day of January, 1959, in the name of Baxter I. Scoggin, Jr., and entitled "Pump-Type Liquid Sprayer Having Hold-Down Cap".

[52] 2. That Claims 1 and 2 of said Scoggin Patent No. 2,870,943, are good and valid in law.

3. That the plaintiff, Calmar, Incorporated, has infringed Claims 1 and 2 of said patent by the manufacture and sale of its model SS-40 sprayer, and that the plaintiff, Colgate-Palmolive Company, has infringed said Claims 1 and 2 by the use and sale of said model SS-40 sprayer.

4. That plaintiffs are not entitled to any of the relief prayed for in their respective complaints, and that the same are hereby dismissed upon their merits.

5. That plaintiffs, Calmar, Incorporated and Colgate-Palmolive Company, and their officers, agents, servants, employees and attorneys, and all persons in active concert or participation with them or either of them are hereby permanently enjoined and restrained from making, using or selling sprayers of the kind known as Calmar model SS-40, or any other sprayer or device embodying the inventions of Claims 1 and 2 of said Letters Patent No. 2,870,943. The injunctions hereinabove granted in these causes are hereby suspended for a period of 30 days from the date of entry of this judgment.

6. That defendant is entitled to recover damages, together with interest and costs, as provided by title 35 U.S.C. section 284, and to an accounting to ascertain the amount thereof, as a result of the acts of infringement adjudged herein.

7. That these causes may be brought up upon motion of defendant to proceed with such accounting, and for determination of the right of defendant to an award of reasonable attorneys' fees as provided by title 35 U.S.C. section 285, either before the court or such special master as the court may appoint.

[53] 8. This is to certify, pursuant to Rule 54(b) of the Federal Rules of Civil Procedure, that there is no just reason for delay in entering this final judgment for defendant on the issues of validity and infringement of said Letters Patent No. 2,870,943 on Count I of defendant's counterclaim against plaintiff, Colgate-Palmolive Company, on the Complaint of plaintiff, Colgate-Palmolive Company, on defendant's counterclaim against plaintiff, Calmar, Inc.,

and on the Complaint of plaintiff, Calmar, Inc.; and the Court hereby expressly directs the entry of such judgment.

Richard M. Duncan
United States District Judge

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[54] ORDER ADMITTING IN EVIDENCE CERTAIN DOCUMENTS and OVERRULING MOTION FOR NEW TRIAL

(Filed in United States District Court on November 4, 1963)

These cases were filed in this court on April 27, 1959, and October 5, 1960, respectively, and thereafter came on for trial beginning March 5, 1962. Following trial before the court, it was taken under advisement, briefs and reply briefs were filed, and finally, on June 19, 1963, the court entered Findings of Fact and Conclusions of Law.

On June 31, 1963, judgment was entered determining the ownership of the Patent involved in the controversy. [55] Thereafter, on August 9, 1963, Motions were filed by each of the plaintiffs, "For a new trial under Rule 59 of the Federal Rules of Civil Procedure or, alternatively, to reopen the record for the purpose of admitting in evidence certain documents attached hereto."

It was contended by the plaintiffs that they had no knowledge or information of the forfeited patents prior to the entering of the judgment in this case, and that they had made timely demand on the defendant for the production of all documents pertaining to the patented device, and that the information, although in the possession of the defendant Cook Chemical Company, was not produced by it.

It is further the contention of the plaintiffs that had these documents been before the court at the time the case was tried, they likely would have changed the results of the court's Findings of Fact and Conclusions of Law. It is defendant's contention that such documents are cumulative.

I have examined the documents attached to plaintiffs' motions, and have re-read the Findings of Fact and Conclusions of Law.

It is my conclusion that had the documents been before the court at the time of the trial, and at the time of the court's findings, that they would not have changed the court's Findings and Conclusions.

[56] It is defendant's further contention that due diligence was not shown by the plaintiffs in bringing these matters to the attention of the court.

I do not believe it is necessary to pass upon that question, and the documents will be admitted.

The court having duly considered plaintiffs' Motions for New Trial, and the briefs in support of and in opposition thereto, said motions are now here overruled.

Richard M. Duncan
Judge

Dated: November 4, 1963

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[57] NOTICE OF APPEAL TO THE UNITED STATES COURT OF APPEALS FOR THE EIGHTH CIRCUIT

(Filed in United States District Court on November 14, 1963)

IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF MISSOURI WESTERN DIVISION

CALMAR, INC., Plaintiff, vs. COOK CHEMICAL COMPANY, Defendant.	No. 12349-3
COLGATE-PALMOLIVE COMPANY, Plaintiff, vs. COOK CHEMICAL COMPANY, Defendant.	No. 13006-3

Notice is hereby given that Calmar, Inc., and Colgate-Palmolive Company, Plaintiffs above named, hereby ap-

peal to the United States Court of Appeals for the Eighth Circuit from the final judgment entered in this action on the 31st day of July, 1963, on the record as amplified by the Order of the District Court filed November 4, 1963.

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Attorneys for Plaintiff, Calmar, Inc.
By William H. Curtis
1701 Bryant Building
Kansas City 6, Missouri

[58] Lathrop, Righter, Gordon & Parker
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Of Counsel:

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Robert F. Conrad
Watson, Cole, Grindle & Watson
815 Fifteenth Street, N.W.
Washington 5, D. C. 20005

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[59] (DOCKET ENTRIES IN UNITED STATES DISTRICT COURT IN No. 12349-3)

IN THE DISTRICT COURT OF THE UNITED STATES FOR THE WESTERN DISTRICT OF MISSOURI WESTERN DIVISION

CALMAR, INCORPORATED,
Plaintiff-Appellant.

vs.

COOK CHEMICAL COMPANY,
Defendant-Appellee.

Apr. 27,	1959	Complaint filed
Aug. 14,	"	Answer and Counterclaim filed.
Aug. 20,	"	Answer to Counterclaim filed.

Oct. 12, 1960	Interrogatories by plaintiff to defendant filed.
Nov. 16, "	Defendant's answers to interrogatories filed.
May 25, 1961	Defendant's Motion for leave to amend with suggestions in support filed.
June 19, "	Plaintiff's Memorandum in opposition to defendant's Motion for leave to amend; supporting affidavits of Bruce S. Shannon and Francis G. Cole filed.
July 7, "	Respective parties appear by counsel before the Honorable Richard M. Duncan, Judge, at Kansas City, Missouri, for hearing on motion of defendant for leave to amend answer by adding counterclaim for declaratory judgment. Arguments are made on the motion and submitted to the Court, which takes the matter under advisement.
July 19, "	Order overruling Motion for leave to amend filed.
Sept. 18, "	Amended answer to counterclaim (with consent of defendant) filed.
Oct. 3, "	Motion to consolidate this cause with cause #13006-3 with memorandum in support thereof filed by defendant.
Dec. 8, "	Parties appear by counsel for hearing on defendant's Motion to consolidate with causé #13006. Evidence is heard and thereafter the defendant's motion to consolidate is by the court taken under advisement.
Dec. 28, "	Order filed. (Motion to consolidate this cause with the first count of case #13006 is by the court sustained.)
Jan. 29, 1962	Stipulation filed.
Feb. 5, "	Stipulation filed.
Mar 5, "	Respective parties appear by counsel and announce ready for trial. Trial is to the Court. Defendant presents testimony—

said testimony not being completed at the hour of adjournment, trial to be continued tomorrow, Tuesday, March 6, 1962, at 10:00 A.M.

Mar. 6, " Trial is continued. Defendant continues testimony.
Defendant's testimony not being completed at the hour of adjournment, further proceedings are postponed until tomorrow.

Mar. 7, " Trial is resumed. Defendant continues testimony and rests. Plaintiffs make opening statement. Plaintiffs present testimony. Plaintiffs testimony not completed at the hour of adjournment—Trial to be continued tomorrow.

Mar. 8, " Trial is resumed. Plaintiffs continue testimony. Plaintiffs testimony not completed at the hour of adjournment—Trial to be continued tomorrow.

[60]

Mar. 9, 1962 Trial is resumed. Plaintiffs complete testimony and rest. Defendant presents rebuttal testimony and rests. Upon completion of all the evidence the case is submitted to the Court which takes the matter under advisement. The Court directs that defendant's brief be filed within thirty (30) days from this date. Plaintiffs' brief to be filed fifteen (15) days thereafter, and defendant's reply brief thereto be filed within fifteen (15) days thereafter. *Richard M. Duncan, Judge.*

Apr. 4, " Motion for order reopening hearing and confirming admission of Evidence filed.
Order filed. (granting the admission of evidence)

Apr. 10, " Defendant's Proposed Finding of Fact and Conclusions of Law filed.
Stipulation filed.

May 3, " Plaintiffs' proposed Finding of Fact and Conclusions of law filed.

June 19, 1963 MEMORANDUM OPINION, FINDINGS OF FACT AND CONCLUSIONS OF LAW filed. (Plaintiffs' commercial device infringes Claims 1 and 2 of defendant's Patent—parties to submit form of judgment entry within 15 days)

July 31, " JUDGMENT FILED. (Cook Chemical Company is owner of Letters Patent No. 2870943; claims 1 and 2 of Scoggin Patent No. 2870943 are good and valid. Plaintiff has infringed claims 1 and 2 by the use and sale of model SS-40 sprayer. Plaintiff not entitled to relief prayed for in complaint and complaint is dismissed upon its merit. Plaintiff permanently enjoined and restrained from making, using or selling Calmar model SS-40 sprayer or any sprayer embodying the inventions of claims 1 and 2. Defendant entitled to recover damages with interest and costs as provided by Title 35, U.S.C. Section 284, and to an accounting. These causes may be brought up upon motion of defendant to proceed to such accounting and for determination of the right of defendant to an award of reasonable attorneys' fee, either before court or special Master. The Court further certifies that pursuant to Rule 54(b), there is no just reason for delay in entering this final judgment and expressly directs the entry of such judgment. Injunction suspended for a period of thirty days. *Judge Richard M. Duncan*

Aug. 9, " Motion by Plaintiff for New Trial under Rule 59(b) of the Federal Rules of Civil Procedure or, alternatively, to reopen the record for the purpose of admitting in evidence certain documents attached hereto with affidavits of Robert F. Conrad and Francis G. Cole in support filed.

Aug.	19, "	Affidavit of Gordon D. Schmidt filed.
Nov.	4, "	Order admitting in evidence certain documents and overruling Motion for New Trial filed.
Nov.	14, "	Plaintiff's Notice of Appeal filed. (Service to counsel for the defendant by Plaintiff)
		Plaintiff's Motion for Supersedeas under Rule 62(d) and 73 with suggestions in support filed.
		Motion to suspend injunction pending appeal filed.
Dec.	3, "	Order sustaining Motion to suspend injunction pending appeal and fixing bond at $100,000.00 filed.
		Bond for costs on appeal filed.
Dec.	4, "	Order filed. (It is further ordered that Colgate-Palmolive Company, plaintiff in Cause No. 13006, be and is hereby not required to execute a bond pending appeal: Provided that Calmar, Inc., the Plaintiff in Consolidated Cause No. 12349, shall execute a bond in the sum of $100,000.00, and on the further condition that the appeal be prosecuted expeditiously.)
Dec.	5, "	Bond on Stay of Injunction during appeal filed.

[61] (DOCKET ENTRIES IN UNITED STATES DISTRICT COURT IN No. 13006-3)

IN THE DISTRICT COURT OF THE UNITED STATES FOR THE WESTERN DISTRICT OF MISSOURI WESTERN DIVISION

COLGATE-PALMOLIVE COMPANY,
Plaintiff-Appellant.

vs.

COOK CHEMICAL COMPANY,
Defendant-Appellee.

Oct. 5,	1960	Complaint filed.
Nov. 30,	"	Answer to Complaint and Counterclaim filed.
Feb. 18,	1961	Plaintiff's reply to defendant's counterclaim filed.
June 13,	"	Interrogatories to Plaintiff filed.
July 1,	"	Plaintiff's Interrogatories to defendant filed.
Aug. 4,	"	Plaintiff's objections to certain interrogatories filed by defendant with suggestions in support thereof filed.
Aug. 7,	"	Answers to interrogatories propounded by defendant filed.
Aug. 17,	"	Order filed. (Plaintiff's objection to interrogatory No. 5 is overruled, the objections to interrogatories Nos. 6, 7 and 24 are sustained.)
Aug. 21,	"	Objections to certain interrogatories propounded by plaintiff—suggestions in support of objections filed by defendant. Answer to plaintiff's interrogatories filed.
Aug. 30,	"	Order sustaining defendant's objections to interrogatories 17(e) and (f) filed.
Sept. 8,	"	Plaintiff's answer to defendant's interrogatory No. 5, filed.
Sept. 1,	"	Supplemental Interrogatory to defendant filed.

Sept.	15, "	Answer to plaintiff's supplemental interrogatory to defendant filed.
Oct.	3, "	Motion to consolidate this cause with cause #12349—suggestions in support filed.
Nov.	8, "	Order sustaining objections to interrogatories 45 and 46 filed.
Dec.	8, "	Parties appear by counsel for hearing on defendant's Motion to consolidate with cause No. 12349. Evidence is heard, and thereafter, the defendant's Motion to consolidate is by the Court taken under advisement.
Dec.	28, "	Order filed. (Motion to consolidate Case No. 12349 with the first count of this case is by the court sustained.)
Jan.	29, 1962	Stipulation filed.
Feb.	21, "	Defendant's Motion under Rule 34 with suggestions in support filed.
Mar.	5, "	Respective parties appear by counsel and announce ready for trial. Trial is to the Court. Defendant makes opening statement. Plaintiff reserves opening statement. Defendant presents testimony—said testimony not being completed at the hour of adjournment, trial to be continued tomorrow, Tuesday, March 6, 1962, at 10:00 a.m.
Mar.	6, "	Trial is continued. Defendant continues testimony. Defendant's testimony not being completed at the hour of adjournment, further proceedings are postponed until tomorrow.
Mar.	7, "	Trial is resumed. Defendant continues testimony and rests. Plaintiffs make opening statement. Plaintiffs present testimony.
Mar.	8, "	Trial is resumed. Plaintiffs continue testimony.

[62]

Mar. 9, 1962 Trial is resumed. Plaintiffs complete testimony and rest. Defendant presents rebuttal testimony and rests. Upon completion of all the evidence the case is submitted to the Court which takes the matter under advisement.

The Court directs the defendant's Brief be filed within 30 days from this date; Plaintiff's brief to be filed fifteen (15) days thereafter, and Defendant's Reply brief thereto be filed within fifteen (15) days thereafter. *Richard M. Duncan, Judge*

Apr 4, " Motion for Order reopening hearing and conforming admission of evidence filed. Order filed. (Granting the admission of evidence)

Apr. 10, " Defendant's proposed Finding of Fact and Conclusions of law filed.
Stipulation filed.

May 3, " Plaintiffs' proposed finding of fact and conclusions of law filed.

June 1, " Order filed. (Sustaining in part and overruling in part, defendant's Motion to produce)

June 19, 1963 MEMORANDUM OPINION, FINDINGS OF FACT AND CONCLUSIONS OF LAW filed. (Plaintiffs' Commercial device infringes claims 1 and 2 of defendant's Patent—Parties to submit form of judgment entry within 15 days.)

July 31, " JUDGMENT FILED. (Cook Chemical Company is owner of Letters Patent No. 2870943; claims 1 and 2 of Scoggin Patent No. 2870943 are good and valid. Plaintiff has infringed claims 1 and 2 by the use and sale of model SS-40 sprayer. Plaintiff not entitled to relief prayed for in complaint and complaint is dismissed upon its merit. Plaintiff permanently enjoined and restrained from making, us-

ing or selling Calmar model SS-40 sprayer or any sprayer embodying the inventions of claims 1 and 2.

Defendant entitled to recover damages with interest and costs as provided by Title 35, U.S.C. Section 284, and to an accounting. These causes may be brought up upon motion of defendant to proceed to such accounting and for determination of the right of defendant to an award of reasonable attorneys' fee, either before court or special Master. The Court further certifies that pursuant to Rule 54(b), there is no just reason for delay in entering this final judgment and expressly directs the entry of such judgment. Injunction suspended for a period of thirty days. *Judge Richard M. Duncan.*

Aug. 9, " Motion by Plaintiff for New Trial under Rule 59 of the Federal Rules of Civil Procedure or, alternatively, to reopen the record for the purpose of admitting in evidence certain documents attached hereto with affidavit of Jack W. R. Headley filed.

Aug. 19, " Affidavit of Gordon D. Schmidt filed.

Nov. 4, " Order admitting in evidence certain documents and overruling Motion for New Trial filed.

Nov. 14, " Plaintiff's Notice of Appeal filed. Service to counsel for the defendant by Plaintiff.

Plaintiff's Motion for Supersedeas under Rule 62(d) and Rule 73 with suggestions in support filed.

Plaintiff's Motion to suspend injunction pending appeal filed.

Dec. 3, " Order sustaining Motion to suspend injunction pending appeal and fixing bond at $100,000.00 filed.

Bond for costs on appeal filed.

Dec. 4, " Order filed. (It is further ordered that Colgate-Palmolive Company, plaintiff in Cause No. 13006 herein, be and is hereby not required to execute a bond pending appeal: Provided that Calmar, Inc., the Plaintiff in Consolidated Cause No. 12349, shall execute a bond in the sum of $100,000.00, and on further condition that the appeal be prosecuted expeditiously.)

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[63] TRANSCRIPT OF PROCEEDINGS

IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF MISSOURI WESTERN DIVISION

CALMAR, INCORPORATED,
Plaintiff,
vs
COOK CHEMICAL COMPANY,
Defendant.
No. 12349

COLGATE-PALMOLIVE COMPANY,
Plaintiff,
vs
COOK CHEMICAL COMPANY,
Defendant.
No. 13006

* * *

[65] Mr. Headley: Your Honor, we would like to make one further statement right at the opening of this case, and I make this on behalf of the plaintiff Colgate: We would like to have the understanding and the permission of the Court that any evidence adduced by the plaintiff Calmar in this case shall also be taken and considered as evidence of the plaintiff Colgate.

The Court: That is as to the patent?

Mr. Headley: Also on these questions of infringement.

The Court: That is what I mean.

Mr. Headley: And any objections made by the plaintiff Calmar in this case or stipulations or statements will also be considered as made by the plaintiff Colgate unless otherwise excepted to.

The Court: Is that agreeable?

Mr. Schmidt: That is agreeable, your Honor.

The Court: Very well.

* * *

[80] DEFENDANT'S CASE

Whereupon, the defendant, to sustain the issues in its behalf, offered testimony, oral and documentary, and made the following admissions, to-wit:

[81] Mr. Schmidt: I will call Mr. Ralph Martin to the stand.

RALPH G. MARTIN,

being produced, sworn and examined as a witness on behalf of the defendant, testified as follows:

Direct Examination by Mr. Schmidt.

Q. Will you state your name and address, please? A. Ralph G. Martin, 221 West 48th Street, Kansas City, Missouri.

Q. You are associated with Cook Chemical Company as president, is that not correct? A. Yes, and have been since 1954. Prior to that I was the executive vice-president and general manager, beginning in 1944.

The Court: President of what?

A. Cook Chemical Company.

* * *

[82] Q. When did you get into household insecticides? A. We started household insecticides in 1945, which is when DDT came on the market. We were the first ones to put DDT on the market.

Q. How did you market it? A. In pint bottles, quart bottles and gallon cans.

Q. When it reached the cow, how was it applied? A. Not at that time, it was applied by tin sprayers they might have purchased. We had no sprayers at all.

Q. You say "tin sprayers"? A. Tin, chemical sprayers.

Q. How were they made? A. There were several manufacturers. We did not do it.

[83] Q. You did not furnish any sprayers? A. Not in 1945.

Q. At a later date I understand you started to use a plastic type pump sprayer? A. That is true. In 1945, we were the first to manufacture, with a full page two-color ad and raise the price to permit this kind of promotion. In 1947, we put the first sprayer on the bottle, attached it with cardboard to the bottle. This was put on the quart bottle as a sales promotion gimmick. It became so successful that the following year we had to put it on the pint bottles. We tried to merchandise with the quart and the pint with sprayer and without the sprayer but we found the public would not take the bottle that did not have a sprayer attached.

* * *

[84] Q. Mr. Martin, I hand you a plastic type of sprayer that has been marked for identification as Defendant's Exhibit Number 16, and I ask you whether or not you can identify that sprayer for us? A. Yes, this looks like the original sprayer that we used in 1947 as a Calmar sprayer.

Q. You believe that as a matter of fact it is one of the early sprayers. A. Yes, I think so.

Q. I hand you now an empty bottle marked "Real-Kill" and identified as Defendant's Exhibit Number 12 and ask that you tell us what that is. A. Well, this is similar to the first product we put out. Our first name was Cook-Kill. This is a Real-Kill bottle, but this is similar to the way we attached the sprayer.

Q. Now, that exhibit does show, does it not, a sprayer hanging on the side of the bottle? A. That is true.

Q. Is that correct? A. That's true.

Q. Will you state for the record the manner in which it is caused to hang on the side of the bottle? A. Well, it is a paper holder that has a hole that the sprayer can fit into, and the hole can be applied over the cap so that we can fit the neck of the bottle through there.

[85] Q. I notice that that holder is made from cardboard, and I ask you to look at Defendant's Exhibit Number 14 and tell us whether or not that device was ever used for a comparable purpose? A. Yes, we paid for the molds on this plastic holder, and this was also made for us by Calmar. I don't recall the year, but we were trying to get a better device than what we had.

Q. Now, what was the purpose, Mr. Martin, for hanging the sprayer on the side of the bottle in the first place? A. Well, so the housewife would have a convenient sprayer to use rather than go look up the tin sprayer that she might have used before, or use a paint brush, such as they did.

Q. Well, could not the sprayer have been sold separately from the bottle without having any affixation to it at all? A. There would be no reason why it could not have been sold separately.

Q. What advantage, then, did you achieve by using a device for hanging it on the bottle? A. Well, we sell through food brokers, and the grocery stores are very reluctant to buy two different items for the same purpose. In other words, they want a one-package deal, if they can get it.

Q. Now, did that prove to be satisfactory as a package? [86] A. Well, it was far more satisfactory, or it stimulated sales greater than when we did not have sprayers on the bottle. It was a sales stimulant, but, of course, we ran into a number of problems.

Q. Did you look upon this as the ultimate or the final answer? A. No, sir, we did not.

Q. What problems, if any, existed because of that arrangement? A. Well, there was a problem that the dip tube would not extend to the bottom of the bottle because it could not be packaged and shipped that way.

Q. What do you mean by the dip tube? A. The tube that extends into the bottle itself.

Q. Is that the tube by which the liquid is drawn from the container by the pump? A. That is right.

Q. Very well, proceed. A. We also found there was a good deal of pilferage of the sprayer itself because it was hung on there in a very instable manner, as you can see.

Q. Where did that pilferage occur? A. At the grocery store level, mainly.

Q. And what was the reason for such pilferage, if you knew? A. Well, of course, we have had many people write in that they use the sprayer for various things, like sprinkling clothes, [87] and I presume that that was one of the motivating factors.

Q. Did you experience any other difficulty with the idea of providing a package having a sprayer hanging on the side? A. Oh, yes. We had breakage in shipment, which was quite annoying. That dip tube is very fragile. We also had problems in packaging. It, as I recall, took about four girls to put the collar over the neck of the bottle. It took about four girls to put the sprayer into the holder of the—of the plastic—

Q. You mean— A. —of the cardboard ring. It also took an extra girl to put the finished package into a carton because of the sprayer hanging on in that manner.

Q. Did you find at any time that you had any competitors that utilized much the same manner of packaging a sprayer with a bottle? A. Later that was the case. In other words, we were feeling pretty good about the situation. We had taken a common industry and made something of it. I don't think there is any question that we might say that we made insecticides respectable to where it was a pleasure for the retailer to handle them because of the profit, and it was a pleasure for the broker to handle them because of the profit. This hadn't been the case before. They had been sold as cheap fly sprays. And we had very little competition until 1954.

[88] Q. What was the nature of the competition commencing in '54? A. Well, in '54 Johnson Wax got into the market, also Colgate got into the market, and Simoniz actually run two test markets. We were quite pleased

at the time, because educating the public is a very difficult thing, and we were spending a considerable amount of our money and running ads, and there was an educational job needed because of the different types of insecticides, and we welcomed their help as far as advertising the uses of an insecticide were concerned.

Q. I hand you a bottle of Colgate's Kan-Kil marked for identification as Defendant's Exhibit 18, and ask you whether or not that is an example of the early competition that you had in this field? A. No, actually this one is not. This, of Colgate—Colgate came on the market with this product in 1958. They had originally come on the market with an aerosol in 6-ounce cans and 12-ounce cans only, but beginning in '58 they put this product on the market.

Q. Will you compare Defendant's Exhibit 12 and Defendant's Exhibit 18 and tell us the similarities, if any, between the two packages?

* * *

[89] Q. (By Mr. Schmidt) Do you recall my question, Mr. Martin? A. Yes. I thought I answered it. They are attached with a paper collar, but the Colgate product came on the market in 1958.

Q. Well, now, is it not true that they are attached in substantially the same manner? A. That is true.

Q. Do you find any difference, substantial difference, between the collars themselves that are connected to the neck of [90] the containers? A. None.

Q. Do you find any substantial difference in the manner in which the sprayers are held in place by such collars? A. No.

Q. Tell us whether or not there were any other instances of competitors adopting the idea of hanging the sprayer on the side of the bottle in that manner? A. Well, Raid started in 1954 with the quart and pint, hanging the sprayer on the side in a similar manner that we do.

Q. Raid being the trademark covering a household insecticide? A. Yes, of Johnson Wax.

Q. Do you recall any other instances? A. There were some local people that used the sprayer. Prior to 1954

the insecticide industry was made up of a multitude of small packagers scattered all over the United States and almost every major city had at least one, and there were a number of those that used the sprayer on the side.

Q. I hand you a sprayer marked for identification as Defendant's Exhibit Number 20. Will you tell us what that is? A. Well, this is the sprayer that we produced in 1956. That is that Bakan product. I say we.

Q. Now, by Bakan whom do you mean, briefly? [91] A. Bakan was the corporation we formed to produce sprayers and dispensers.

Q. What was the purpose of that? A. Well, the purpose of it, we wanted to find a second source of supply. In 1954 the Calmar Company had sold their interest to the Drackett Company. The Drackett Company were makers of Windex and they had used many millions of bottles of window cleaner, and they were also buying a sprayer from Calmar. We could not be sure whether they would attempt to attach a bottle—a sprayer to the bottle or not. There was only one substantial supplier and that was Calmar. We had tried to find other suppliers of sprayers so that we could have a second source, without success. In other words, we tried to improve the sprayer through Calmar and tried to find other sources that would give us a better package than this.

* * *

[92] Q. Tell us now, briefly, the attempts, if any, made either by Calmar Company or by yourselves, Cook Chemical Company, prior to 1956 to come up with a better type of package than hanging the sprayer on the side of the bottle. A. Well, I presume that we tried to induce Calmar to do something about this situation as early as 1949 because of the problems I have mentioned. Now, it was either '51 or '52 when they brought us what I refer to as a lock-down sprayer that could be shipped directly in the carton and eliminate some of these problems we had.

Q. I hand you Defendant's Exhibit 26 and ask you whether or not that is representative of the so-called lock-down sprayer that you just mentioned? A. Yes, it is.

Q. Tell us about that sprayer. What do you mean by lock-down? What was its purpose? [93] A. Well, you could depress the head into slots and turn it and it would keep the spring depressed, and the purpose, of course, was that it could be shipped in the bottle and it wouldn't be hung on the side It would make a neater looking package.

Q. Now, that particular type of so-called lock-down sprayer was in fact submitted to you as an answer to your problem by Calmar Company? A. That is true. I'm sure that it was made at our request.

Q. When you received that as a supposed answer to your problems, what were your reactions? A. Well, it never got out of the laboratory actually, because we immediately discovered that the sprayer would leak down the stem, and we also discovered very quickly that it would break in shipping, the head would break off.

Q. Do you know of any instance where that type of lock-down sprayer was actually placed in use by anyone in the commercialization of household insecticides? A. Oh, yes.

Q. By whom? A. By Johnson Wax in their product Raid. Nineteen hundred and fifty eight was the year they came out with it.

* * *

[94] Q. (By Mr. Schmidt) Do you recall what designation was given to that type of sprayer by Calmar Company? A. I believe it was the SS 25, if I remember correctly.

Q. Now, back to Defendant's Exhibit Number 24—

* * *

which was originally marked as Defendant's Wise deposition Exhibit 5 on May 25, 1960. Identify that exhibit and explain what it is all about, please. A. Well, this product came on the market in 1958. This was the answer to our sealed-in sprayer that we used late in '57, 1957. Now, actually the first shipments didn't come [95] on the market this way with this cellophane collar or cello-seal cover over the sprayer. They first came on the market, to my recollection, with a cardboard cylinder that fitted over here

to protect the sprayer head. I think this was done after they discovered that they, too, had some breakage in shipment of this article, this insecticide.

Q. Now, first off, what is the product in the can that you are holding, Exhibit 24? A. Well, it is Raid, roach and ant killer, a liquid insecticide.

Q. All right. Secondly, what is the nature of the sprayer in the container? A. The nature of the—

Q. Sprayer. A. Well, the sprayer is similar to the sprayer that we used hanging on the outside of the package, except with a lock-down feature here in the collar.

Q. Is it in any way comparable to Defendant's Exhibit 26? A. Yes, I'm sure it is the same sprayer.

Q. Again, we have the so-called lock-down S 25 Calmar sprayer in the Raid container, is that correct? A. Oh, yes.

Q. Now, you mentioned a hood or cover? A. Yes.

Q. What is it like? What's it for? [96] A. Well, I think they would call it a cello-seal, and they have it in a liquid, and when they push it over here it shrinks down and seals the sprayer and the cap together. Now, there's no question that this was an attempt to contain the liquid that was flowing down the stem, and actually when products are shipped, shippers sometimes invert the cases, and when they do the liquid would run down the stem and discolor the carton. Actually, the cello-seal never worked on the product at all. It wouldn't contain the liquid.

Q. Do you recall when you first saw it on the market? A. It was in 1958.

Q. And do you know when it was discontinued and a substitute shipped? A. Well, I do know this, that Raid took back thousands of cases and reworked them, and I would say that sometime in July or August of '58 they called these shipments in from the market.

Q. I hand you what has been marked Defendant's Exhibit Number 42 and ask you to explain that. A. Well, this is the same product, Raid's product, the same type of product, except it has the Calmar locked-in sprayer that gives the same appearance as ours, the same function actually.

Q. Now, approximately when did that come on the market? [97] A. I do not know whether it came to the market in '58 or '59. Insecticides all have been presold up until recent years. By that I mean they ship several weeks, actually several months ahead of the consuming season and when you get to August you are about wound up as far as business is concerned.

Q. In any event, would you say that Defendant's Exhibit 42 immediately followed Defendant's Exhibit 24 on the market? A. Oh, yes.

Mr. Headley: Mr. Schmidt, that Raid, what company is that that puts that out?

The Witness: Johnson Wax.

[98] Q. I think the full name of the company is on this exhibit? A. Yes, by law it has to be.

Q. Will you read it into the record, please? A. It is S. C. Johnson & Sons, Inc.

Q. And that appears on both Exhibits 24 and 42? A. Yes, the S. C. Johnson & Company, Racine, Wisconsin.

Q. Again before leaving Exhibit 42, the nature of the sprayer, I understand you to say is the Calmar sprayer? A. That is right.

Q. And which one? Is it again the lock-down type? A. Oh, no, it is the new sprayer that came out, I don't know what they called it, SS-40 or something.

Q. Was it the accused sprayer here in suit? A Oh, yes.

Q. I now hand you a sprayer that has been marked for identification as Defendant's Exhibit 30, and ask that you examine it carefully. Do you recognize that sprayer? A. Oh, yes, this is what we called our Model No. 2 sprayer and is the first integrated sealed-in sprayer that was manufactured. It came on the market with this in 1957.

Q. You say, "we came on the market"? A. By that I mean Cook Chemical Company and Bakan.

Q. I hand you a bottle again of Real-Kill, marked for identification as Defendant's Exhibit No. 28, with a sprayer integrated therewith, and ask you to compare that sprayer [99] with that of Defendant's Exhibit 30. A. It is the identical sprayer. The coloring is different but it is the identical sprayer.

Q. Would you say that Exhibit 28 represents the manner which associated the sprayer, Exhibit 30, with a container? A. That is true.

Q. Now, when did that association take place? When does it take place? A. That took place in August of 1957.

Q. I mean when was the sprayer integrated with the container? A. Oh, after the bottle is filled.

* * *

Q. (By Mr. Schmidt) I now hand you a sprayer marked Defendant's Exhibit 46, and a container with a sprayer associated therewith, as Defendant's Exhibit 44. Will you tell us what those sprayers are? A. This was the second production of our Model 2 sprayer.

Q. Is there any similarity between the two sprayers of those two exhibits? A. Oh, yes, they are practically identical in my conception.

[100] Q. Approximately when did this type of sprayer come on the market? A. That sprayer came on the market I believe in December of 1959.

Q. What did you call it? A. Still the Model 2.

Q. Now again, Mr. Martin, I hand you an individual sprayer with a cover cap as before, marked Defendant's Exhibit 50, at the same time a Real-Kill container marked Defendant's Exhibit 48, and having a sprayer end cover cap thereon. Will you explain those sprayers and tell us whether or not they are the same or different? A. Yes, sir, these sprayers are the same.

Q. Whose sprayers are they? A. They are our sprayers.

Q. When did they come on the market? A. They came on the market in 1960.

Q. What did you call them? A. We call them our Model 3.

* * *

[101] Q. Tell us, Mr. Martin, now generally what these various sprayers with cover caps attached thereto are designed to accomplish. A. Well, they are designed to accomplish several things, to eliminate the problems that I spoke of, that is, the dip tube extending down into the

container to the bottom or approximately the bottom. They are designed to eliminate breakage in transit. They are designed to have a better appearance on the shelf. They are designed to allow piling in a store. They are designed to allow pricing on the top of the sprayer. They are designed to effect the seal between the cap and the sprayer, and the sprayer itself so that it can be placed on a container and the seal not affected.

Q. You spoke of several difficulties that you had with hanging the sprayer on the side of the bottle, for example, pilferage. Is this new package capable of alleviating the pilfering problem? A. Yes, we have no problem of that any more.

[102] Q. Do you know why? A. Well, I assume when you take that sprayer out, take the cap off, that you have a bottle that isn't sealed. It is a little more difficult for people to get to that.

Q. You spoke of breakage in shipment with the sprayer hanging on the side of the bottle? A. That has been eliminated.

Q. It has been eliminated so far as the dip tube is concerned? A. That is right.

Q. I think you testified that the dip tube is now in the bottle at the time of shipment? A. Yes, sir, and more or less protected.

Q. What about breakage of the rest? A. It is also protected. The collar is designed to actually give support to that cover cap so that it becomes a protective cap in shipping and protects the sprayer itself.

* * *

[103] Q. Mr. Martin, can you tell us whether or not by virtue of the particular type of the products that your chemical company is packaging, there were special problems created insofar as developing this new package is concerned? A. Oh, yes, there is a problem of containing the liquid itself because it is very fluid, as you probably notice, a petroleum solvent which is a carrier for the insecticide is a wetting agent in itself and will flow where water will not. I want to say this, too, while the sprayer that we hung on the side of the bottle in '47 was a

tremendous success, the sprayer when we put it inside the container was outstanding. We were forced to replace I don't know how many thousands of sprayers, when they put it inside the container. We took back many sprayers that hung on the side.

Q. You mean to say that the container with the sprayer hanging on the side at the retail level was returned to you? A. Oh, yes, we couldn't sell it at all. We still take some back occasionally after all these years.

Q. Why is it? A. Well, the public just refused to buy an insecticide that has a sprayer hanging on the side, just like they refuse to buy an insecticide without a sprayer after 1947 and prior to 1957.

Q. Was that peculiar to Cook Chemical Company or do you know [104] whether it existed by your competitors? A. Anyone selling insecticides have adopted that idea.

Q. Do you know whether or not the sprayer hanging on the side of the bottle has been left on the shelves as far as your competitors are concerned? A. Oh, yes, you can't sell an insecticide that way any more. You just can't do it.

* * *

[105] Cross-Examination by Mr. Conrad.

(Plaintiff's Exhibit A and Plaintiff's Exhibit B marked for identification.)

Q. Mr. Martin, towards the end of your direct testimony you were telling us that it was nowadays difficult to merchandise insecticides in containers unless the sprayer was mounted in the container, as illustrated, for example, by Defendant's Exhibit 44. A. That's true.

Q. Now, I understand that the first full year in which you marketed your insecticides with the sprayer mounted in the bottle, as illustrated by Defendant's Exhibit 44, was the year 1958, is that correct? A. That is true, 1958, that is true. We didn't have that type of bottle with the ears on it in 1958.

Q. But you did have the sprayer mounted in the bottle? A. We did have the sprayer in the bottle.

Q. Now, prior to 1958 you had sold many thousands of bottles of insecticide that had the sprayer mounted on

the side, as illustrated by Defendant's Exhibit 12, did you not? A. That's true.

Q. Now, how did your sales in 1958, the year in which you first mounted the sprayer in the bottle, compare with your insecticide sales, say in the previous year? [106] A. Well, I don't have those figures before me.

Q. Do you have any reason to doubt that your sales, total sales of insecticide, dropped by half a million dollars during the first year that you merchandised your insecticide with the sprayer mounted in the bottle? A. There was a very good reason for that.

Q. That is the fact? A. I do not know without examining the records.

Q. Is it your recollection that there was some drop in sales during the first year you marketed your insecticide with the sprayer mounted in the bottle? A. I'm sorry, that isn't my recollection.

Q. According to your recollection was there any appreciable increase in sales? A. There was none.

Q. Now, Mr. Martin, I have had marked as Plaintiff's Exhibit A and Plaintiff's Exhibit B two packages which I believe were bought locally in a grocery store. I would like you to examine them, please. Have you had an opportunity to look at them? A. Yes.

Q. Can you identify the sprayer units which are inserted in those bottles? A. Yes, they're the Bakan sprayer, Bakan Number 2 on this one—this is Exhibit A—and the same appears to be [107] true on Exhibit B.

Q. I noticed in order to make your examination you removed the caps and then replaced them. A. That is right.

Q. Now, you noticed the conditions the bottles were in when I handed them to you. A. Well, the cap on one was loose.

Q. The cap on one was—you say was loose? A. Yes.

Q. Now— A. Both the container cap on one and the overcap on one was loose.

Q. I see. Now, have you returned them to their normal position? A. I'm not sure that they were returned to the position they were when you handed them to me.

Q. Have you returned them to their normal position? A. I'm not sure.

Q. Would you like to examine them again? A. These sprayers are put on, the cover cap, is put on with a machine that puts on an extra torque on there and this torque is supposed to remain constant. We have nothing to do with putting this fastener on the container itself.

Q. I see. A. So there could be some variances in that.

Q. Well, do they look normal as you have now fixed them? [108] A. They appear normal. I haven't tried to tighten them to what proper torque they should be.

Q. Then you have examined them carefully? A. No. I haven't examined them to see what torque they should possibly be on either the cover cap or on the container.

Q. Are you familiar with the condition of your sprayers when the proper torque has been applied to it, to the cover cap? A. No, that's a technical question. I wouldn't be familiar with that.

Q. I now ask you to examine Plaintiff's Exhibits A and B again and tell me if the condition they are now in is what you regard as representative of the sprayer units made by you and designated Bakan 2 when they are in use on a container? A. Whose container?

Q. On this particular container. A. On this particular container. It appears to me that the cover cap comes down and hits the container cap before it should, on both of these models. I don't know the reason for that.

Q. I see. And you say you regard that as abnormal? A. Yes, I regard that as abnormal.

* * *

[109] Q. Now, I want you to notice, Mr. Martin, that I have now fixed one of these caps so that on—on Plaintiff's Exhibit A—so that it does not touch the bottle cap, does not touch the bottle cap. Now, I understand that you are telling me that that is more or less a normal position of the overcap with respect to the bottle cap? A. That is more or less normal, yes.

Q. I see. Now, I have fixed the other cap, Plaintiff's Exhibit B, so that the bottom of the overcap touches the top of the bottle cap. You see that? A. Yes, sir.

Q. Now, I want you to visualize these two units as they are now fixed sitting on the shelf of a grocery store. Is it your belief that a housewife would select one rather than the other on the basis that on the one the bottom of the cap was not touching and on the other it was touching the bottle cap? A. I would think not. I wouldn't think it would make any difference.

[110] Q. Wouldn't make any difference. Thank you.

Mr. Conrad: Your Honor, I might at this time, just for your assistance, tell you that the purpose of this line of questioning was the following: The claims of the patent in suit specify that the sealing arrangement up inside the cap be such that the bottom of the overcap is maintained out of contact with the cap of the container.

* * *

[111] Q. I see. Now, by the way, Mr. Martin, your testimony was directed almost exclusively to insecticides. Are these pumps made by you and Calmar, the various pumps you have identified, confined in their use to dispensing insecticides? A. Oh, no.

Q. Now, you also examined Defendant's Exhibit 10, which is the Scoggin patent. I will now hand that to you again. Do you find any reference in that patent to insecticides? A. I don't know. If you say there isn't, I will take your word for it. I have never read the patent.

Q. I see. Now, Mr. Martin, turning your mind back to the year 1949, which is, I believe, the time you mentioned when you pleaded with Calmar to come up with some kind of an improved sprayer, do you recall the occasion to which you referred? A. No, I don't recall the specific occasion. I do recall the problems we had when we hung the sprayer on the side.

Q. I see. But nevertheless you did sell many millions of these insecticide units with the sprayer hung on the side? A. Many millions.

Q. Could you give us an estimate of how many millions were sold in that condition, that is as represented by [112] Defendant's Exhibit 12? A. Well, I would estimate that we sold in excess of 50 million.

* * *

[117] Mr. Conrad: Please mark this.

(Plaintiff's Exhibit C marked for identification.)

Q. Mr. Martin, I am now handing you a letter consisting of two pages with four attached pages illustrating sprayers, and ask you if you can tell us what that is? A. Yes, this is a letter put out by Mr. Groebe, Senior Vice-President, undoubtedly to our agents.

Q. What is the date of that letter, please? A. It is dated here November, 1959.

Q. I see. That would be shortly before you first marketed this sprayer which is exemplified by Defendant's Exhibit 46? A. That is true.

Q. Now, will you please read for us, Mr. Martin, the second [118] paragraph on page 1 of that letter? A. "This new cover cap is designed so that it makes a perfect seal on the collar—which the old one would not do."

Q. Thank you. Now, the old one referred to I assume is Defendant's Exhibit 30? A. We must assume that.

Q. Now, Mr. Martin, are you aware that, and I believe you testified to the effect that the accused structure which is called by the plaintiff its SS-40 sprayer was marketed in limited quantities in the late summer of '58, and the commercial production began in January of 1959? Is that in accord with your understanding? A. If the SS-40 is the proper designation of their sealed-in sprayer, over the cover cap, yes, that is my recollection of it.

Q. That is in accord with your understanding? A. Yes.

Q. Now, you recall identifying one of those units I believe as Defendant's Exhibit No. 34? Do you recall that? A. Yes.

Q. Are you familiar with the fact that this unit, Defendant's Exhibit No. 34, which is accused structure, is also provided with what are called inner-seals? A. Yes, I am familiar with that.

[119] Q. Now, the Bakan 2 sprayers made by you prior to the time that the Calmar unit came on the market did not have any inner-seals, did it? A. Well, I think on some products that you might consider it an inner-seal. I know in some products such as starch they had no leak-

age into the cap. If the material was viscous, you might suppose the way that spring pressed against that ball that it created to some extent an inner-seal.

Q. Was there any actual design and construction of parts whose purpose was to effect inner-seals? A. Not to my knowledge.

Q. Now, this is true both with respect to your Bakan and Bakan 2? A. That is right.

Q. With respect to your Bakan 3, that came on the market after the Calmar device with the inner-seals was on the market? A. That is true.

Q. Now, with your Bakan 3 device, it does, however, have an inner-seal? A. Yes, it has an inner-seal and a head seal.

* * *

[121] Q. You understand, of course, that the plaintiff company has manufactured many millions of these? A. I would assume that they would. We have lots of competition, since we started making it.

* * *

[122] Q. Now, I want to get back a moment, Mr. Martin, to the effect you said that it is virtually impossible to retail insecticides without having the spray unit in the container, [123] as more or less illustrated by Defendant's Exhibit 44? A. We find it so.

(Plaintiff's Exhibit D marked for identification.)

Q. Mr. Martin, I want to direct your attention to the container which I have marked as Plaintiff's Exhibit D, which has a pump assembly attached to the side. A. Yes, sir.

Q. Can you identify that for us? A. Yes, that is our product, Real-Kill with a sprayer on the side.

Q. Is that being marketed at the present time? A. It is not being successfully marketed.

Q. But it is still on the market? A. I can still make that same statement.

Q. Let's say you are still trying? A. We are still trying. I didn't say we quit trying.

* * *

Re-Direct Examination by Mr. Schmidt.

Q. You mentioned, Mr. Martin, on cross-examination that these sprayers and cover cap units that are being sold and manufactured by Cook Chemical find use in fields other than insecticide? [124] A. Oh, yes.

Q. Tell us a few examples of those uses. A. They use it in window cleaners, in white sidewall cleaners; they are used in products to clean artificial flowers. I think there are 18 or 20 different categories. They are used in starches as we see here. They are used in waxes.

Q. I will hand you again Plaintiff's Exhibit C, and refer you to paragraph 2 on page 1 that you read into the record, and I will ask you whether you agree with that statement fully? A. You don't have to agree with that statement from the standpoint that it does not make a perfect seal in all cases. I don't think we have reached perfection in anything yet.

Q. Are you saying then that the original Bakan 2 sprayer assembly did not and could not always effect a perfect seal? A. That is true, but it was still a highly satisfactory item as far as we were concerned.

Q. To what extent by virtue of a certain amount of imperfection have you had difficulties and complaints? A. We have had practically none. I suppose we have sold well in excess of 15 or 20 million, that is, used and sold, and I would say that we haven't had 100 complaints that I am aware of.

Q. Did you find that you had established a perfect seal when [125] you came out with Bakan 2 modified? A. No, I would say, no; no, I don't think we have a perfect seal.

Q. You still have instances of leakage past the seal? A. Oh, yes.

Q. Is that leakage any greater or any less than in the Bakan before you changed the seal? A. I am not aware of it if it is. I don't think it is.

Q. When you came out with the Bakan 2 modified and subsequently the Bakan 3, were you then forced to completely discontinue Bakan 2? A. Oh, no, we are still selling many, many Bakan 2's. Some people prefer it.

Q. Did you abandon sales of Bakan 2 modified after coming on the market with Bakan 3? A. Oh, no, we still sell them. I want to correct one statement there. I still refer to our original Model 2 and the modified 2 as 2.

Q. It is still 2? A. Still 2. Now, the original model as you know has been modified and we are no longer selling that for the very reason that we spent $20,000.00 for a machine just to put this cap on and put it on with a certain force and we wanted something that we ought to make and besides that we didn't want to have too many inventories, so that was [126] the reason.

* * *

[129] Q. (By Mr. Schmidt) Where is the sprayer unit manufactured? A. It is manufactured at 935 North Wabash in Kansas City, Missouri.

Q. Where is the cover cap applied to the collar and the fluid? A. At 935 North Wabash, Kansas City, Missouri.

Q. Where do you bottle your insecticides? A. At the Baton Rouge plant.

Q. Does that mean that this sprayer assembly with the cover cap on and with the seal established is shipped from Kansas City to Baton Rouge, is that correct? A. That is true.

Q. And that your bottler in Baton Rouge merely applies the sprayer assembly to the filled container by screwing the container cap in place? A. Oh, yes, we used to have two machines, one to put this one (indicating)—

Q. One to put the cover cap on? A. One to put the cover cap on. We would put it on lightly but they would have to tighten it at Baton Rouge and the other put the container. This eliminates one tightening machine now.

Q. Now, in the home when the housewife has purchased the product, what need she do in order to be able to use it? A. All she has to do is to take the cover cap off.

* * *

[131] Q. And the desirability of the new product is not peculiar to household insecticide, is that correct? A.

Oh, no, no. It has opened up many doors, many doors. Starches, waxes, window cleaners.

* * *

[132] Re-Cross-Examination by Mr. Conrad.

Q. Mr. Martin, I'm a little puzzled about your last statement, that this sprayer with the overcap opened up a lot of new markets, when you indicated a little earlier that the sales of your product, for example, didn't jump when you started to use the overcap. A. I have an explanation for that. Would you like me to give it?

Q. Certainly. A. I said, previously testified, that in 1954 we welcomed the competition of S. C. Johnson and Colgate and even Simoniz, because we felt that we needed help in educating the public in the use of a residual inseciticide and a space insecticide. As you know, advertising is very expensive. At that time I did not realize the tremendous, crushing powers of firms with unlimited resources, and in the spring of 1958, by gimmicks, Colgate loaded the retail trade with millions of dollars of insecticide, and much of that insecticide is still sitting in the shelves, because it was insecticide that had the sprayer hanging on the side of the bottle.

Q. How does this account for the—I don't quite get the relationship between what you just told us and the fact that you said earlier that the advent of the overcap [133] on your sprayer opened up new markets for this type device. A. Well, it did open up new markets. However, a horse can only drink so much water, and if you load a retailer with 25 or 50 cases of insecticide, it makes it very difficult for you to sell any or get very much in there yourself, and this is exactly what Colgate did in '58.

Q. I'm not certain that I get the significance of your answer with respect to the question I asked, but let's go on to something else, Mr. Martin. . . .

* * *

Q. I think you mentioned that with respect to the S 25 LP that was manufactured by Calmar that it never got out of the laboratory. Do you recall making that statement? A. It never got out of our laboratory.

Q. I see. You do know, however, that that is sold in large quantities, even today, do you not? A. I know that it is sold in quantities even today. I know that it is not sold in insecticides today.

* * *

[135] Q. I see. But the matter of how much it cost to make a sealed-in sprayer is a factor in deciding whether or not you are going to use it? A. Certainly.

Q. And it is an important factor? A. It is an important factor, yes.

* * *

[136] Mr. Schmidt: I have one additional problem I would like to take up at this juncture. During the lunch hour we were handed a copy of a subpoena to one of our people whom I understand is out of town, Chester Turner, and we do not as yet know when he will be back, perhaps a little later on in the week, and I am wondering from my adversaries when they would like to have him here. He will probably not be back before Wednesday or Thursday.

Mr. Conrad: We certainly don't want to interfere with the normal work of that man more than is necessary. [137] I don't know how long it will take you to complete your case but the chances are we won't be introducing our evidence until perhaps Wednesday morning and other witnesses will occupy part of the day and I suppose we may take Mr. Turner as late as Thursday.

Mr. Schmidt: In the subpoena there is a request for the production of "all documents of any kind (including memoranda, correspondence and inter-office communications) prepared or dated within the period beginning August 1, 1956 and ending on the date of first commercial production of sprayers known as Bakan Model 3 Sprayers, relating or pertaining to (1) pump-type dispensers or sprayers having (or designed or intended for use with) hold-down caps or protective caps or (2) hold-down or protective caps or (3) parts for use with items (1) or (2) above, in your custody or in the custody of Cook Chemical Company, its divisions or subsidiaries."

We feel that this request has come in rather late and is a substantial duplicate of a request made of Cook Chemical Company by Calmar in November of 1959, immediately preceding the taking of the deposition of Baxter R. Scoggin, Jr., the inventor of the patent in suit. At that time the Cook Chemical Company made every effort to gather together all such material, presented it to counsel prior to his taking the deposition of Mr. Scoggin. It [138] was looked at and examined and every bit of material that was desired at that time was pulled out and placed in the deposition and Mr. Scoggin was interrogated relative thereto. We hardly know what additional material they want. We feel this goes far beyond what they should be requesting and we would like it to be much more specific and indicate wherein we have not produced what they already have in the record.

The Court: All right. I do not know anything about it, gentlemen. I am not going to fool with it now at the time of trial. You will have to fight it out among yourselves.

Mr. Conrad: May we discuss that after this afternoon's session?

Mr. Schmidt: Very well.

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[142] Mr. Schmidt: As an adverse witness, your Honor, I call Mr. Robert Wise.

ROBERT WISE,

being produced, sworn and examined as a witness on behalf of the defendant, testified as follows:

Direct Examination by Mr. Schmidt.

Q. State your name and address, please. A. Robert Wise, 6936 Crystal Springs Road, Cincinnati 27, Ohio.

Q. What is your occupation, Mr. Wise? A. I am president of Calmar, Inc.

Q. You hold a position as officer in any other company? A. Yes, I am a vice-president of the Drackett Company of Cincinnati, Ohio.

Q. How long have you been president of Calmar, Inc.? A. Since April of 1955.

Q. Is that about the time that the Drackett Company purchased Calmar? A. It was shortly after the purchase of Calmar by the Drackett Company.

[143] Q. What was the business of the Calmar Company at the time that you became president? A. I didn't become president of the Calmar Company. I became president of Calmar, Inc.

Q. Which was a corporation subsequently formed, is that correct? A. That is right.

Q. And did Calmar, Inc., continue the business of the original Calmar Company? A. No, it did not. Calmar, Inc., was formed as a sales and product development and engineering corporation. It did not do any manufacturing.

Q. What was the business of Calmar Company then at the time it was purchased by Drackett? A. Calmar at the time it was purchased manufactured sprayers and dispensers and sold them.

* * *

[144] A. Calmar Company was producing a line of standard sprayers, one of which was the S-25, which has been mentioned in this dispute. Another was the so-called RS-10 sprayer, which was a fine mist sprayer that had been used by the Drackett Company in connection with a room deodorant. They also had a larger capacity sprayer called the S-15-L, which was a sprayer that had a little circle with a top on the head, enabling the housewife to use that circle to operate the sprayer, and they had experimentally a sprayer called the S-25-LP.

Q. What was the nature of the S-25-LP? A. The S-25-LP was a leak-proof sprayer.

Q. In what sense was it leak-proof? A. It was leak-proof in that it had two collars between which was an "O" ring. The head of the sprayer had two lugs attached to the sprayer and when it was depressed into the collar structure and locked it provided a seal to prevent liquids from coming out of the container.

Q. Is that the so-called bayonet slot-type of a sprayer? A. Correct.

Q. After the formation of Calmar, Inc., did such corporation continue handling the sprayers of the type to which you have just referred? A. Yes.

Q. Now, by whom were those sprayers manufactured? [145] A. They were manufactured by the Calmar Company, a division of the Drackett Company of Los Angeles, and by the Marmac Company of Puerto Rico.

Q. For and in behalf of Calmar, Inc.? A. For and in behalf of Calmar, Inc.

Q. Then the Calmar, Inc., in turn sells such sprayers? A. Correct.

Q. Is that today the manner of operation of Calmar, Inc.? A. Yes.

Q. Calmar, Inc., is not then today a manufacturer of any sprayers, is that correct? A. No, it is not.

Q. After you became president of Calmar, Inc., were you presented with any request or was your company presented with any request for a so-called integral leak-proof shipper spray? A. We had several conversations, I wouldn't say specifically that we were requested. We had many conversations with customers concerning a leak-proof sprayer.

Q. Did those requests come in part from Cook Chemical Company, the defendant in this case? A. I remember having conversation with a Baxter Scoggin concerning leak-proof sprayer and I may have had conversations with others in the Cook Chemical organization, but I do not specifically remember their asking for samples [146] of the leak-proof sprayer that we had available experimentally at that time.

Q. I do believe that prior to the formation of Calmar, Inc., Cook Chemical had received the samples of the S-25-LP available from the former owners. We have searched the record and we have been unable to find where Calmar, Inc., as such, sent samples of the S-25-LP sprayers to Cook Chemical. Believing that such were in fact submitted to Cook Chemical Company, can you tell us for what purpose? A. If they had been submitted to Cook Chemical, I am sure they would have been submitted for use for insecticides, particularly the—specifically the Real-Kill line of insecticides.

Q. Was the purpose of answering their request for a sprayer, is that one? A. Yes.

Q. I hand you Defendant's Exhibit 26, and ask you whether or not that is the S-25-LP sprayer about which you have been testifying? A. It is.

Q. Did you receive any request from any customers of Calmar, Inc., for integrated or shipper sprayer? A. Yes, we did.

Q. Will you name a few of those customers? A. The insecticide fields request from the S. C. Johnson [147] Company. We also supplied them to Colgate-Palmolive, and we supplied to Esso Standard Oil; in the case of window cleaners, we supplied them to the Drackett Company; in the case of hair sprays we supplied them to Dermott, Inc. There are many others that I am not too familiar with.

Q. Do I understand your testimony to be that the S-25-LP sprayer as submitted by you to such customers in response to their request for a shipper's sprayer? A. It was submitted by the people working with Calmar, Inc., our organization.

Q. How did it work out insofar as the insecticide field was concerned? A. We had some very serious difficulties with the S-25-LP in the insecticide field, primarily due to several reasons. I would like to elaborate upon this a little if I may.

Q. Yes. A. This bayonet type of joint to make a unit leak-proof had been made and sold by various Calmar organizations for several years for use with relatively thick products such as hand lotions. At the time that I assumed the presidency of Calmar, Inc., we did have available the S-25-LP experimentally. There seemed to be something of a demand for the S-25-LP for use for thin liquids. In analyzing the product because it had some difficulty with leakage, we determined that the major difficulty or certainly one of [148] the major difficulties for usage with thin liquids had been that the various component parts had not been made to uniform dimensions. In fact, some of them needed to be changed, so bit by bit we began to change the product in an effort to make it more satisfactory. We felt we were pretty largely successful until such

time as we transferred the tooling to Puerto Rico and we encountered serious assembly problems. This joint, pointing here to the collar structure, is composed of two different solvent joints. We underestimated, for example, the fact that the solvents would not evaporate as fast in a humid atmosphere in Puerto Rico and we locked down the sprayers too soon, the pressure of the spring in the locked position tended to cause the collars to lift, thus permitting some degree of leakage by the opening. That was an immediate problem, a long-range problem in the insecticide field and one that in some aspects with a certain type of insecticide was one of chemical compatibility. As a result of these serious difficulties, the product was subsequently returned to Los Angeles for production. We finally corrected all of the tooling and this product today is being sold in substantial quantities to satisfied customers, if not for insecticides.

Q. And it has never been successful in connection with insecticides, is that correct? [149] A. I would say perhaps it has never been successful, perhaps due to the fact that we introduced a new product at considerably lower prices than the prices being charged for this product. This product had a great many parts and required a rather difficult assembly and it always sold at a higher price than the prices which you charged for your product.

Q. You mentioned a new product. What did you mean? A. I am referring to the new SS-40 sprayer which was developed at the time that we began to encounter serious difficulties with this product.

Q. About what period of time? A. The development of the SS-40 sprayer to the best of my knowledge began early in 1958. I can't say that I could pinpoint any specific date because you must remember that our interest in leak-proof devices went back a great many years and to pinpoint when you start a specific research on something is often quite difficult. It seems to me the first drawings I saw of the SS-40 occurred in around March or perhaps April of 1958.

Q. Now, you are not intending to have me understand that the primary reason that the S-25-LP was not satisfactory in insecticides was because of the cost, are you?

A. I would say the cost would definitely be a serious factor.

Q. It was a factor. Is that the primary reason why it was [150] not satisfactory, in connection with it? A. No, the primary reason was the fact that we had serious manufacturing difficulties almost instantly resulted in a leakage which, of course, aggravated our customers.

Q. Leakage was the main problem? A. Leakage was a very serious problem.

Q. I hand you Defendant's Exhibit 24, and ask you whether or not, it does not represent an effort on the part of one of your customers to solve the problem which you could not solve? A. Mr. Schmidt, I gather that this does represent an effort on the part of S. C. Johnson to overcome some of the difficulties that we encountered. Whether or not this was successful I don't know. I didn't know that it had been done when it was done, and I don't know who did it, but obviously it is a type of wrap over the sprayer and over the container cap.

Q. Do you mean to say that during the time that that product was being marketed and commercialized by your company, S. C. Johnson Company, you were not aware of the cover with the cellulose hood? A. Mr. Schmidt, I believe I first saw this when I made one of my occasional trips to Los Angeles and I saw it in our office by virtue of the fact that it had been picked up by one of our men. We had had some conferences [151] with Johnson. We were very unhappy about the products they had on the shelf which incorporated the S-25-LP and which were leaking but I was not aware of the time that they made the decision to put on apparently this type of overwrap. I was later informed, after I had seen it, that they had arranged to have this done.

Q. Then you were aware of that cellulose covering during the time it was being sold? A. I was.

* * *

[152] Q. Mr. Wise, I hand you what has now been marked for identification as Defendant's Exhibits 152, 154, 156, 158, 160, 162, 164 and 166, and ask you whether or not those letters, memoranda, and other material from the files of Calmar represent the difficulties which you

experienced with the S-25-LP sprayer? A. These exhibits are all related to the sad difficulties that we were having in relation to the S-25-LP as outlined in these reports. Most of these are related primarily to our manufacturing difficulties. It was our conviction that the method that we had chosen, or the principle involved in closing off a sprayer so as to prevent leakage from the container was and is basically sound.

Q. Nonetheless— A. Nonetheless we had difficulties, primarily manufacturing difficulties.

[153] Q. I ask you to look at Defendant's Exhibit 166, please. This appears to be a memorandum from John F. Boehm to you, is that correct? A. That is correct.

Q. Dated August 29, 1958? A. Correct.

Q By that date had you not gone a long way in your development of the accused structure? A. By that date we were building the production tooling for the SS-40 sprayer.

Q. Will you, please, read these two short paragraphs of the memorandum into the record? A. "Dear Bob: The S-25-LP continues to plague us with just about every order that we receive. I have investigated the Garry Laboratories complaint and I find that they are entirely justified in charging us back for the unsatisfactory sprayers and resulting damage as outlined in the attached memorandum. Although you may not wish to withdraw the S-25-LP from the market, I believe that we should certainly discourage our sales force from pushing this item. Signed John Boehm."

Q. Is that the culmination of all the difficulties that you had had with that sprayer in the insecticide field? A. I wouldn't say that represents the culmination. It is true we had great difficulty, and at the time that this memorandum [154] was written we were in the process of correcting the S-25-LP deficiencies. Mr. Boehm was handling sales orders, and his comment that we might not wish to withdraw the S-25-LP from the market but that he thought we should discourage our sales force from pushing the item entirely represented his own viewpoint. The S-25-LP was never withdrawn from the market. It was corrected, it is being sold to this day.

Q. For insecticide purposes? A. Not for insecticide to the best of my knowledge, but I honestly don't know.

Q. Now, you made other efforts, did you not, to solve the problem of integrating a sprayer with a container? A. Yes.

Q. I hand you what has been marked Defendant's Exhibit 150, and ask you what that is. A. This exhibit represents a cross sectional sketch, you might say, of what we termed as a boot, the boot being made of polyethylene and looking something like an elongated balloon, with the thought in mind that this would be inserted in a bottle and then a standard type sprayer would be inserted inside the boot, preventing leakage in this manner.

Q. Did that device ever reach the market? A. I don't believe that it did. I know that we made trial tooling, and I believe we submitted samples made from trial [155] tooling to you.

Q. To Cook Chemical Company? A. No, to you during the depositions.

Q. Oh, has it ever been used, as far as you know? A. Not to the best of my knowledge.

Q. And do you know why not? A. Well, primarily because, number one, it was another item that would be expensive. Number two, it would require an additional operation on the part of our customers. They would have to insert this in the bottle, and then they would have to insert the sprayer inside the boot. Number three, it would perhaps cause some confusion with the housewife, who, in order to make the sprayer work, would have to remove the sprayer and then remove the boot and then dispose of it. I would say that the combination of marketing and expense considerations dictated its not being used.

Q. I hand you Defendant's Exhibit 30, and I ask you whether or not you recognize that sprayer? A. Yes, I do.

Q. What is it? A. This is the original Bakan model 2 sprayer, to the best of my knowledge.

Q. When was the first time that you ever saw the original Bakan 2 sprayer assembly? [156] A. I think it was some time in the Fall of 1957.

Q. Who called it to your attention? A. I don't believe I recall who called it to my attention as such.

Q. Did you call it to the attention of anyone else in your company? A. No. Somewhere along the line I think it was called to my attention. I don't recall calling it to the attention of people in our company. I think they called it to my attention first.

Q. Did you at any time discuss the unit with anyone in your company? A. Yes, I did.

Q. And when was that? A. Well, I would say late 1957 and all during 1958, possibly part of '59.

Q. And with whom did you discuss it in 1957? A. Oh, possibly with Hal Harnage, our production manager, Rex Cooprider, who is now in our research department, and Jim Stewart in our sales department, and possibly our salesmen.

Q. Do you recall having discussed it with Mr. Corsette? A. Yes, I did.

Q. And when was that? A. I believe that was some time in 1958.

Q. When did Mr. Corsette first come with your company? [157] A. Corsette was employed by us I think in December, 1957.

Q. Did you hire him? A. I hired him.

Q. For what purpose? A. Well, Mr. Corsette had been employed by a company called Autron (spelling) A-u-t-r-o-n, who had been building for us an automatic assembly machine for assembling our standard sprayers. They had difficulty completing this machine and getting it to work within the contractual period. We took over the machine in an uncompleted state. We employed Mr. Corsette. His first assignment with us was to get this machine completed, work out the production bugs, and send the machine to Puerto Rico. When he first came with us, I know that he spent, I would assume, three full months working on this machine daily.

[158] Q. Mr. Wise, is it not true that Mr. Corsette's first, number one, priority project under your direction and request was to attempt to produce an integrated sprayer comparable in appearance to the Bakan Number 2 unit? A. I don't believe that's true, Mr. Schmidt.

Q. Did you not so testify in your deposition? A. I don't recall that I did testify that way in the deposition. New products are of major importance, but I'm sure that that wasn't his first assignment.

Q. Very well. When do you now say that Mr. Corsette started to work on that project? A. Yes, he started to work. Up until the time that Mr. Corsette had been employed we had never had a research and engineering department as such. All of the product development in the entire history of Calmar prior to Mr. Corsette's employment had been on something of a semi-schedule or hit-and-miss basis. It was done by people who normally had other functions to perform. With Mr. Corsette we started out to establish an engineering and product development department, which I believe was the first department in the history of our industry.

Q. Did the fact that Cook Chemical Company had come on the market with the Bakan 2 unit influence your thinking in so far as setting up that department was concerned? [159] A. I wouldn't say that it was particularly significant. The big problem that those of us who are in the sprayer and dispenser business have is to meet the big competition of aerosols. Our industry has not enjoyed the type of growth that we would like to have seen. For example, I think in a period of about seven years the number of sprayers produced has probably gone from 35 million to maybe 55 million per year, and during that same period aerosols have grown from possibly 200 million to maybe 800 million.

* * *

Q. Let's go back to Mr. Corsette. Did he not undertake the task, at your direction, of developing a satisfactory [160] integrated sprayer unit subsequent to your having first seen the Bakan 2 on the market? A. Will you repeat the question?

Mr. Schmidt: Will you read the question, please?

(Question read.)

A. Mr. Corsette was given the assignment to develop an adequate shipper sprayer, and that assignment, I believe, was made after we first saw the Bakan sprayer.

Q. Then your answer to my question is "Yes," is that correct? A. Because primarily—I don't think he went to work for us until December of '57, and I think we saw the sprayer before that.

Q. But is your answer to my question, yes, he did have an assignment to produce an integrated sprayer unit? A. Yes.

Q. And you assigned that to him? A. I assigned the project to him along with other projects.

Q. What were your instructions with respect to his assignment in connection with the Bakan 2 unit? A. I don't recall that I gave him any specific instructions.

Q. Did you indicate to him your desire that he should come up with a unit that simulated in appearance the Bakan 2 unit? [161] A. No, I did not.

Q. Do you recall whether or not your customers—Colgate, for example, the plaintiff here in suit—requested of Calmar, Incorporated that it furnish an integrated sprayer unit duplicating in appearance the Bakan 2 unit? A. Colgate did not request any such thing. Colgate suggested to us very definitely in discussing shipper sprayers that they preferred the appearance of the Bakan overcap sprayer to that of the S 25 LP. As to the degree of significance, I can't say. Some people prefer redheads to blonds. We have customers today who prefer the appearance of the S 25 LP to the Bakan unit, and buy this product for that reason. Perhaps I shouldn't have elaborated, but I don't think we should put too much emphasis or importance on the problem of appearance.

(Defendant's Exhibit 198 marked for identification.)

Q. Mr. Wise, for purposes of identification, the Wise deposition Exhibit 45 has now been marked Defendant's Exhibit 198. It is entitled, "Development Committee Meeting of December 17." It is dated December 18, 1957, headed "Calmar, Inc." Would you please read the encircled paragraph into the record that appears on page 2 of that document.

[162] A. "R. Wise reported that Colgate rejected our leak-proof boots and expressed preference for Bakan appearance. Would, however, prefer that item be a true

leak-proof sprayer rather than just a shipping closure as produced by Bakan."

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[184] CLARENCE T. FISHLEIGH,
being produced, sworn and examined as a witness on behalf of the Defendant, testified as follows:

Direct Examination by Mr. Schmidt.

Q. What is your full name? A. Clarence T. Fishleigh.

Q. And your age? A. 66.

Q. What is your occupation? A. I am a consulting engineer, registered as a professional engineer in a number of States, including Illinois, Ohio, and Michigan and New York.

* * *

[185] Q. What did you do in 1917 after four years in the College of Engineering? A. I was graduated from the College of Engineering, the University of Michigan, with a degree of Bachelor of Science in electrical engineering.

* * *

[186] Q. When did you go into consulting engineer work? A. In 1930 I became associated with my brother, Walter T. Fishleigh, in Detroit, to practice as consulting engineers.

Q. What type of work have you done as a consulting engineer? A. Our work has been generally divided into two different divisions. The first was what might be called a general consulting business along mechanical and automotive lines with particular reference to the development and engineering of new products. In addition to that we did considerable work down through the years in connection with engineering testimony and patent litigation.

Q. Have you done any testing at schools such as universities? A. Yes, I have done a great deal of testing at laboratories of schools such as Illinois Institute of Technology, University of Michigan, New York University, the University of Detroit, Case School of Applied Science,

as well as in the laboratories of many large and small industrial concerns.

[187] Q. Has your experience included expert testimony, engineering testimony in the United States District Courts? A. Yes, it has been my privilege to give so-called expert testimony and engineering testimony in a considerable number of District Courts, from Massachusetts to California, and from Minnesota to Florida, including one previous appearance here before this Court.

Q. You have had experience studying patents, file wrappers, mechanical elements of claims and the like? A. I have had occasion to study many hundreds, if not thousands of patents over the last 30 years and particularly I have had occasion to study the mechanical elements of the claims of such patents to determine what was the scope of those elements considered in the light of the Patent Office procedure, the prior art considered by the Patent Office and the prior art relied upon by defendants in subsequent litigation.

Q. Name a few companies for whom you have done consulting work. A. Oh, I have worked for Ford Motor Company, General Motors, Chrysler, International Harvester, Linde Air Products, Sunbeam Corporation, Vendo here in town, just to name a few.

Q. Are you a member of any professional societies or organizations? A. Yes.

[188] Q. Would you name a few? A. I am a member of the American Society of Mechanical Engineers, the National Society of Professional Engineers, as well as the Ohio and Illinois Societies of Professional Engineers, the Western Society of Engineers in Chicago. For close to 30 years I have been a member of the Society of Automotive Engineers.

Q. Do you have any legal training? A. Yes, sir.

Q. Do you have a law degree? A. Yes, I have a J.D. degree from Detroit College of Law.

Q. You are admitted to practice in Illinois and Michigan, is that correct? A. Yes, sir.

Q. Are you currently engaged in the practice of law? A. No, sir.

Q. What experience, if any, have you had with devices and problems germane to the pump type of sprayers here in suit? A. I have been generally familiar with sprayers and seals for a great many years. Frequently used them, taken them apart and repaired them of one kind and another and at one time had some work in connection with the designing of seals. I have studied the Scoggin Patent in suit and I have also had occasion to operate, take apart and test various of the commercial structures manufactured by the defendant here [189] under this patent in suit, as well as the accused Calmar sprayer.

Q. And you have made comparisons of the two? A. That is correct.

Q. Will you now please refer to the patent in suit, Scoggin Patent No. 2,870,943, Defendant's Exhibit 10, and explain to the Court in detail the structure and the operation of the pump-type liquid sprayer therein described? A. In order to assist in the explanation of that structure I have prepared an enlargement of the drawings in that patent which has been marked for identification as Defendant's Exhibit 54. The Scoggin Patent 2,870,943 is entitled, "Pump-Type Liquid Sprayer Having Hold-Down Cap". It consists in its assembled form or is utilized in connection with a container, No. 12 in Figures 1 and 2 of the drawings and that portion of the drawings which we have colored yellow on this Exhibit 54, Defendant's Exhibit 54. Then there is a screw-type cap, numbered 14 and colored red, which normally is screwed onto the screw threads of the neck of the container, it being a container of metal or glass or, for that matter, plastic.

The cap, 14, has an opening through the center; in other words, it is perforated, and through that perforation extends an extension, 22, of what is called the barrel of the sprayer unit. The sprayer unit is numbered generally [190] as 10, and is not shown in detail as to its internal operation. The specification refers to another patent to Martin, 2,362,080, and says, "that the sprayer 10 is internally constructed in a suitable manner as, for example, in accordance with teachings of the aforementioned patent." But there is a barrel in connection with this pump mechanism which we have colored flesh color and is identified generally by the numeral 24. It has an exten-

sion down below, 28, and then on down to what is generally called a dip tube, 30, which extends to or near to the bottom of the container, and inside of the barrel of the pump unit is a plunger, 26, on top of which is a head, 32. On these drawings the plunger 26 has been colored orange and the head 34 has been colored brown. At the bottom of the plunger is a piston and there are various check valves, ball check valves in the mechanism but not shown such that when the plunger is depressed by pushing down upon the head 34, the liquid is forced up from the container and out through an opening at the point marked 32 on these drawings, and that is normally a nozzle-type opening such that the material comes out in a relatively fine spray.

Then there is a member called a retainer or collar which is identified generally by the numeral 18 as shown in Figure 2 on these drawings and which we have colored [191] green. The retainer fits relatively tightly over the flange 22, flange 22 of the barrel which extends up through the perforation in the cap 14, and the retainer 18 is cemented or otherwise fastened to the barrel 20 to hold the barrel in place on the cap 14.

Q. To the barrel extension 22, in other words? A. Yes. Now, on top of that retainer there is a rib or segment 56 which, as shown in Figure 2, is of triangular cross-section and on the outside, outer circumference of the retainer there are in this preferred showing a pair of screw threads marked 52 and 54 in Figure 1, and I believe generally identified by the numeral 46. In this particular instance there are a pair of separate screw threads.

The last physical element of the structure is a member identified by the numeral 40, a hold-down cap, and that cap has an open cylindrical interior, the space marked 42 in Figure 1 and a somewhat larger cylindrical space at the open end of the hold-down cap, which has an interior screw thread so that when the cap is applied to the retainer it can be tightened into place by means of the cooperating threads at 46 and 52 and 54 and 44.

In addition, at the point where the smaller of the two cylindrical openings in the cap comes to its bottom, there is a shoulder 50 and that shoulder, and it is shown

[192] in the preferred form, has a downwardly faced member or portion which is in this particular form horizontal and then it joins the cylindrical portion with an annular edgelike portion that runs around the interior of the cap and as the cap is applied to the retainer that edge portion comes down and contacts one side, in this instance the outer side of the rib or segment 56, and depending upon how tight the cap is applied, that junction of the vertical cylindrical surface and the flat surface may contact the segment somewhere between its base and its peak, or as shown in the drawings it might be tightened up so that it comes down and in addition to the contact of the edge of the side of the segment there is contact between the horizontal flat portion and the upper base of the retainer 18 outside of the segment, and in that way either by means of the one contact of the edge portion circumferentially around the segment 56, there will be a seal established or, as shown in the drawings, that may distort some so as to have a continuous contact down along the surface of the outer surface of the segment 56 and along the bottom of the shoulder marked 50.

I believe that that covers the general explanation unless you have some further questions

Q. You mentioned the word "distort". Which of the elements do or can distort? [193] A. The patent mentioned in prescribing the preferred form that the member 18, and I am referring to Column 3 of the Scoggin Patent, beginning in line 15: "The material from which retainer 18 is produced is soft enough to be slightly compressed when shoulder 50 and the corner adjacent thereto, rides along the upwardly and inwardly inclined outer face of rib 56 when cap 40 is moved to position." So that as indicated for the preferred form, the retainer is somewhat softer although as shown in the drawings I would say that it tended to indicate that the cap was somewhat softer than the retainer 18.

Q. You mean whichever is softer than the other, you do get a distortion at the seal? A. Well, you are very likely to, yes.

Q. Are there other portions of the specifications of the patent in suit to which you desire to refer to further explain? A. Well, I have marked several number of pages

in my copy that I thought might be pertinent if you care to have me refer to them.

Q. Yes, do so. A. Well, the first is the introductory paragraph in Column 1: "This invention relates to improvements in structures for dispensing liquids wherein is provided a spray-type hand pump mounted within a container for the liquid [194] through use of the closure cap of such container."

And then dropping down to line 36 and running through 61 is a statement of the various objects of the invention. Perhaps I should read the one thing in line 40: "Another important object of the present invention is to provide structure capable of carrying out the functions above set forth which is also adapted to enclose the head of the plunger and thereby protect the same, as well as handlers of the merchandise by virtue of the fact that the said plunger is completely enclosed and held at the innermost end of its reciprocable path of travel."

Q. Judging from the remaining parts of the specifications and drawings, in what way would handlers be protected? A. Well, they would be protected against leakage.

[195] Q. Very well, continue. A. In column two perhaps we should note the portion beginning in line seven. "Both cap or closure 14 and retainer 18 are received by a cylindrical extension 22 of frusto-conical barrel 24, forming a part of the sprayer 10. Extension 22 being integral with flange 20 at the innermost edge of the ladder. Flange 20 is integral with barrel 24 near the larger uppermost edge of the latter and is held against the underside of gasket 38 in the cap 14 when the sprayer 10 is operably associated with container 12."

Q. Now, would you say that particular arrangement, as illustrated in the drawings insofar as the gasket is concerned, must always be followed? That is, is that a part of this invention particularly? A. That detailed arrangement?

Q. Yes. A. No, I believe not. There is an alternate and I believe more commonly used arrangement whereby the flange corresponding with the flange 20 extends out

as between the top of the container and the flat side of the cap 14.

Q. And have you found in inspection of the Defendant's devices that the latter way is more commonly used? A. That is the way, and it is my understanding that it has been used that way quite consistently.

Q. Very well. Continue, please. [196] A. Another reference, beginning in line 67 of column two. "In addition to the seal provided between shoulder 50 and the top surface of retainer 18, there is established an additional annular seal between annular rib 56 and the annular surface of cap 40 immediately adjacent to shoulder 50. This seal is clearly illustrated in Figure 1. The cross-sectional contour of rib 56 is as shown in Fig. 2 to present an upwardly and inwardly inclined annular face which snugly fits against the corner or line of juncture between the shoulder 50 and the adjacent annular inner face of cap 40."

Q. Now, will you refer again to Fig. 2 of the patent in suit, Defendant's Exhibit 54, and point out the, what we might call the horizontal upwardly facing top surface of the retainer 18? A. The particular part that is being referred to is this top surface outside of the segment, although, of course, actually the entire top is such a—

Q. Now, that is exteriorly of the rib or segment? A. Yes.

Q. And it is at the base of such rib? A. At what?

Q. At the base of the rib? A. Yes.

Q. Now, you just read what appeared to be an additional seal. [197] Would you explain now how there might well be two seals there in effect? A. Well, yes. As shown in Figure 1, there is shown a seal between a bottom annular horizontal surface on the inside of the cap and—or that is the portion which is referred to as the bottom surface of the shoulder 50, and this top annular surface of the retainer 18. As shown here, that would form one seal. And in addition to that it refers to a seal as between the corner of that formed between that horizontal surface of the cap and the inner annular cylindrical surface, that corner and this inclined edge or surface of the segment.

Q. Now, that explains, and I believe your testimony was to the effect that if the cap is not brought entirely down to a point where it engages the horizontal flat top surface of the retainer 18, nonetheless you get a seal on the inclined surface of segment 56. A. That is correct, and that might result either from not tightening it quite as tightly or if because of tolerances it might be that the inner diameter of the cap were of such a nature that it wouldn't go down, that is were smaller than the—or sufficiently smaller than the outer diameter of the segment 56 that it wouldn't get down to exact contact in the flat surfaces.

Q. Now, are you familiar with the structure and with the [198] operation of the pump-type sprayers and the hold-down caps that have been manufactured and commercialized by the Defendant? A. Yes, I am.

Q. Will you, please, explain then the structure and operation of such commercial devices? A. In order to help do that I have a number of items. To start with, I have a drawing which is marked as Defendant's Exhibit 72, and I might say that for the moment I am referring to what has been spoken of as the Bakan No. 2, the first commercial structure embodying the principles of the Scoggin invention. In addition to that I—

The Court: May I inquire, has this been referred tc, this SS-40, is this by any chance—

Mr. Schmidt: The SS-40, your Honor, is the accused structure. The Bakan 2 is the Defendant's structure.

The Court: All right.

A. I also have an enlarged plastic model of the Bakan 2, which has been marked for identification as Defendant's Exhibit No. 32, and perhaps I can start with the explanation of that and then go to some additional factors.

Q. If you will, please. A. As to the Bakan 2 as shown on Defendant's Exhibit 72, I think I can pass most of the structure by saying that except [199] for the two or three things which I will call attention to, the structure is substantially identical to that shown in Figures 1 and 2 of the Scoggin patent in suit. There are a couple of small detail differences. For example, whereas in the Scoggin patent the segment or rib 56, as shown as triangular in

cross-section with a relatively sharp point at the top, as shown in the right-hand figure of the two figures on Defendant's Exhibit 72, there is a radius or curve at the top of that segment in the commercial structure, Bakan 2. In addition to—

Mr. Conrad: Excuse me, Mr. Fishleigh. Your Honor, I have no indication at the moment what the purpose of the Defendant is in having Mr. Fishleigh explain the commercial structure of the Defendant. Obviously we cannot be accused of infringing the commercial structure. The question is whether or not the patent is infringed.

Mr. Schmidt: If your Honor please, the purpose of showing the nature of the Defendant's device is to show your Honor that Defendant has in fact manufactured and sold under the patent in suit and followed its invention and that the commercial success that it has had has been because of that fact.

The Court: All right, before the Court. [200] Go ahead. Overruled.

A. In addition to that difference in the contour of the top of the rib 56, there is another difference which has already been alluded to, and that is that the flange on the barrel of the pump corresponding to the flange 20 as shown in Figure 2, on Defendant's Exhibit 54, that being the drawing of the Scoggin patent in suit, in the case of Bakan 2 as shown on Defendant's Exhibit 72, that flange extends out further so that it comes between the cap marked 14 in Scoggin and the container itself, so that there is a clamping action as between the cap 14 and the container that is of this flange. Those are the two particular points there. I have a large model, that is an enlarged model, of the structure showing—showing the grey, dark grey portion as the so-called retainer, and I notice in looking at this that I should point out one detailed difference which I believe is of no importance here, but where there are a pair of threads on the retainer shown in the patent in suit, there is just a single thread on the outside of the retainer here. And I am now pointing, as I hold the unit in its position, I am pointing to the upper surface of the rib or segment corresponding to 56 in the patent drawings, and it is easy to see that that upper ridge is

rounded over. In the hold-down cap there is the upper cylindrical surface, then a flat annular horizontal surface, and a sharp, relatively [201] sharp edge as between the flat annular surface and the cylindrical surface, and when the two are put together as is shown here, and, of course, there is less flexibility in this model because of its large size, less opportunity for distortion, but as this model is organized, that annular edge between the flat horizontal and the cylindrical surface comes in contact with the side of the segment about two-thirds of the way down, and if that were of material such as these structures are commercially made of and small enough, it could be pushed down so that it would come in contact with the flat surface as well. In this particular model it does not. The only seal shown there is between the edge and the side of the segment.

Mr. Conrad: That is just about the right size to fit on a beer keg, your Honor.

The Court: The opening is a little too small for that, however. The orifice is a little too small, I think, for that.

Mr. Schmidt: Do you normally spray beer?

Q. (By Mr. Schmidt) You may proceed. A. In order to more clearly see what does happen in these commercial structures—because, of course, when we pick up any one of them and attempt to look at it the seal portion is inside, we can't tell just what is happening—I have had a series of four such models made in which I have taken [202] or had taken the collar—and the collar is the clear white portion on these models—and fastened that to the top of a metal piece, and then screwed the cap on with certain washers in between so as to hold the cap in various positions of application, and then have cut out a portion of it so as to expose the part, and if I may refer to another drawing I can show that, I believe. I have another drawing which has been marked for identification as Defendant's Exhibit 92 and is colored, still greater enlargement, of a portion of Figure 1 of the Scoggin patent, just running down to the upper part of the container, and I have circled with just an ink circle that portion of the device with which these models is intended to show what happens there. Now, these, of course, are very small, and

I do have a glass which would help us some in looking at the exact structure, but to assist still further I have had—I put these models on a shadowgraph machine and have taken photographs or had photographs taken at approximately 20 to 1 magnification so that we can see what they look like. This series of four Polaroid pictures of these four models have been marked for identification as Defendant's Exhibits 64, 66, 68 and 70. And I perhaps should point out that the four models have been marked for identification as Defendant's Exhibits 56, 58, 60 and 62.

Q. Mr. Fishleigh, just a moment, I think Counsel is a little [203] behind here.

Mr. Conrad: We haven't related the exhibit numbers on the photograph to the cutouts that he is now referring to.

Mr. Schmidt: I will help him, if you can wait just a moment, please.

The Witness: All right.

Mr. Schmidt: The four samples that have been sectioned are 56, 58, 60 and 62. The corresponding photographs, respectively, are 64, 66, 68 and 70.

Mr. Conrad: Thank you.

Q. (By Mr. Schmidt) Very well. I'm sorry. A. Now, referring to Defendant's Exhibit 64, for example—and if we hold them in the manner that I am now holding—the white portion, the whitest part, represents a cross-section of the upper part of the retainer and the rib. In other words, the part going up and curved around the top is the rib, and the part at the left of that rib, which runs horizontally and then curves around, corresponds to the annular portion that we previously pointed out on the retainer just outside of the rib. And then the additional bulge down below to the left is a portion of the thread. Then the less clearly shown, but rather easily observed if we follow it carefully, portion in the left as I am [204] coming down, that represents the cap, and I am now pointing to the cylindrical—interior cylindrical surface of the cap just at a point such as I am now pointing to. And then it runs out horizontally and where the curve is shown is corresponding to the thread in the interior of the cap.

Q. Mr. Fishleigh, would you at this juncture point out to the Court exactly where the lens looked into, where the camera looked into those cut-away samples? A. Yes. The samples were laid down in the manner that I am now laying them, with the number, the 56 for example, up, and the lens looked right as I am now pointing with my pencil, right down into that portion of the cut-away part, as we look at the window, shall I say, the left side of the window, at the part—and you can see correspondingly the part I am now pointing to is the white portion and then here is the cap coming down to the thread and on down. It can be correlated.

Q. Pinpointed at the point of juncture, at the point of sealing, is that correct? A. Yes.

Q. Thank you. A. Now, the first picture, 64, shows the condition prior to engagement of the sealing members or sealing portions of the cap and rim. In other words, there is no contact between the lower surface nor the lower corner of the cap [205] with the diaphragm.

Q. And that is because the washer is holding the cap spaced from the collar in the [model] is that correct? A. That is right. It is being held for purposes of stability in a position which it would be as it was being fastened down before it came in contact. The second one is also slightly before contact. Again, this—incidentally, there will be slight differences in these, in the detail of these pictures, because they are on different samples. In this field, there are very slight differences.

* * *

A. When we get to the third one, which is the photograph which is Defendant's Exhibit 68 and it corresponds to Exhibit 60, we show a contact between the curved corner of the cap and [206] the curved corner of the curved surface of the segment. And then the last one, Exhibit 70, which corresponds to the sample Exhibit 62, shows the condition when the cap is down into full contact in this instance, and it does show a sealing along the edge of the segment, and also a contact across the bottom, the annular flat surface.

[207] Q. In Exhibit 62 there is no washer at all? A. That is correct.

Q. Will you now proceed to the second commercial form, referred to as Bakan 2 modified? A. A drawing of the Bakan 2 modified has been marked for identification as Defendant's Exhibit 90 and in its general organization is quite similar to the Bakan 2 and to the structure shown in the Figures 1 and 2 and 3 of the Scoggin Patent, shown on Defendant's Exhibit 54, with again certain changes. The structure, the configuration of the top portion of the retainer 18 has been changed. The rim or ridge corresponding to 56 has been moved out to the extreme edge, outer edge of the retainer, and then we have a cylindrical outer surface and then a rounded top and come in on an incline on the inner side only and for a limited length on one incline and then a somewhat flatter incline beyond that, and the interior of the cap instead of having the flat surface marked 50 in the drawing Figure 1 of the Scoggin Patent has a projection extending down as shown in this left-hand figure here on Defendant's Exhibit 90, and the arrangement is that as the cap is screwed onto the retainer, the edge of the retainer, that projection or shoulder on the inside comes down inside of the surface inside of the segment or rim or rib, and contact is made between that member [208] and the inner portion of the retainer instead of on the outside of that retainer rib.

Now, I have a model which shows that, showing the construction of that portion; actually this is a model that is marked Defendant's Exhibit 52 and includes some pieces of the so-called Bakan No. 3, but as far as what we are talking about here is concerned, it represents the Bakan 2 modified because the cap construction to that extent and the rib construction are the same in both. In other words, the retainer, the outside wall continues straight up and then bends over and comes in with an incline and then a flatter incline and on the inside it is a little difficult to see, but there is a projection sticking down with sort of a groove and there is a mating between the ring or segment on the retainer and that projection on the inside of the cap.

Now, here again in order to see how the device operates, we have prepared samples which are marked 74, 76, 78 and 80.

Q. Are Defendant's Exhibits 74, 76, 78 and 80 and a series of photographs, Defendant's Exhibit 82, being a photograph of the model Defendant's Exhibit 74—

* * *

[209] Q. Will you continue, Mr. Fishleigh? A. I believe I had just pointed out that the photograph, Defendant's Exhibit 82 corresponds to the model Defendant's Exhibit 74. The photograph, Defendant's Exhibit 84 corresponds to the model Defendant's Exhibit 76. The photograph, Defendant's Exhibit 86 corresponds to the model Defendant's Exhibit 78, and the photograph, Defendant's Exhibit 88 corresponds to the model Defendant's Exhibit 80. Here again the whiter portion on these photographs is a cross-section.

The Court: That is 82, is it not?

A. Yes, I have 82, and the cross-section of the whiter portion, that is the whiter portion of the photograph that is a cross-section of that part of the retainer and the other part which shows tool marks and grain marks, tool marks particularly is a cross-section of that portion of the cap and it is quite clear that as the cap is being brought down, this projection, the shoulder to the right is not yet in contact with the retainer.

The next photograph, Defendant's Exhibit 84, again shows the device brought into closer contact but still no actual contact as between the two parts.

The third photograph, 86, again is hardly in contact although it shows the cap down further than it was in the preceding one, but when we come to Photograph 88, [210] being the showing in the model 80, we can see that there is a definite contact as between that projection on the inside of the cap and the inclined surface of the retainer, that is, that projection has come down and there is contact all the way down the inclined surface and the bottom of the projection touches substantially at the juncture of the two inclined surfaces, either an upper—

Q. (Interrupting) Explain what are the dotted lines that are used on each of those photographs? A. Those are dotted or dashed lines that represent the center lines on the ground glass of this shadowgraph machine in which these

prints were taken so that it gives one an opportunity in adjusting to set up the material at substantially the center of the lenses.

Q. Does that also indicate the position of the model in the photograph with respect to horizontal and vertical as it was being photographed? A. It does, because before the photographs were taken those lines were lined up with the top edge of the base, the metal base on which the models are mounted.

Q. Will you compare Defendant's Exhibit 88 and Defendant's Exhibit 90, and tell us whether you see, you find a general correspondence? A. Yes, in general. Actually in 88 there is a slight space shown above the top of the segment on the retainer, whereas, [211] in the drawing, being considerably smaller, there is no such space shown. The drawing indicates as if it were down just a shade tighter than the photograph 88.

Q. Similarly may we back up to Defendant's Exhibits 70 and 72? A. Well, I would say that 70 and 72 are substantially identical insofar as anything of this sort is concerned.

Q. Now, Mr. Fishleigh, have you studied the mechanical elements of the claims in issue of the Scoggin Patent, Defendant's Exhibit 10? A. Yes, I have.

Q. Will you please explain the mechanical elements of Claims 1 and 2 of the Scoggin Patent and in so doing point out where such elements are present in the structure shown in the drawings of the Scoggin Patent? Do you have any charts or diagrams? A. I have prepared a chart which I thought would be helpful in making such an explanation. That chart has been marked for identification as Defendant's Exhibit 94.

Claims 1 and 2 have been set down in the columns to the right as is evident, at a glance. Claim 2 is a dependent claim, dependent upon Claim 1. The introduction is a section of what I have marked "Introduction" in Claim 1, "In a closure assembly for an open-top container", and finds a response in the "closure assembly for liquid [212] container 12", the container being colored yellow, and the rest of the device is what is generally referred to in this. Having "a perforated cap over said open top there-

of", and that refers to the cap 14 which on these drawings as in the previous drawings of the Scoggin Patent has been colored red.

"C. A spray unit including a barrel provided with a tubular extension passing coaxially upwardly through the perforation in said cap." That finds its response in the sprayer unit marked generally as 10 and includes the barrel 20, colored flesh color and also includes the tubular extension 22 which does pass upwardly through the perforation in the red cap 14.

"D" of the introduction, "A plunger reciprocably carried by the barrel and normally extending therebeyond", and that is, as the note indicates, the "Tubular plunger 26," colored in these drawings orange and it does extend up beyond the barrel in which it is carried, and the last of the introduction: "E. A spray head on the upper end of the plunger above said extension", and that finds its response in the "Spray head 34", colored brown in both Figure 1 and Figure 2 on this chart.

Then, "The combination with said spray unit of an annular retainer telescoped over and secured to the extension above said cap and provided with external, [213] circumferentially disposed screw threads and an annular, continuous segment at the upper part of the retainer above said screw threads." As my note indicates that finds its response in the annular retainer 18 colored green on these drawings and that retainer does have the screw threads at 46 and the annular segment or rib 56 to which we have referred previously and it is telescoped over the tubular extension of the barrel and secured thereto.

The second element, "A cup-shaped hold-down member housing the head and holding the plunger depressed at substantially the innermost path of travel thereof within the barrel, said member", that is as far as it goes. That refers to the hold-down member 40 colored light blue on these various drawings of Figures 1 and 3 on this chart.

And as shown in Figure 1, in its assembled position, that hold-down member 40 on cap 40 does hold the head depressed into substantially its lowermost, or as the claim

says, "innermost path of travel", as it would be depressed in normal spray operation.

Then continuing, "Said member", that is the cup-shaped member, "being provided with internal screw threads complementally engaging said screw threads on the retainer", and those are the internal screw threads 44 shown [214] in prospective in Figure 3 but also shown in cross-section up here in Figure 1 on this chart.

"4. An internal, circumferentially extending, continuous shoulder disposed to engage said segment around the entire periphery thereof and thereby present a liquid-tight seal located between the spray head and said threads on the retainer." Considering it that far, that finds its response in the "downwardly facing shoulder 50", and I should say at this point that I am not there referring merely to this annular horizontal surface but the shoulder itself just as in my own case, my shoulder is not just the upper surface but a substantial part of the body is the shoulder and it is my understanding that in this case that refers not only to the lower surface but that contacting rim and a reasonable part of it so that it is a structure rather than a surface merely.

And in that instance, as I have pointed out, it is the evening between the annular surface and the cylindrical surface which in the first instant contacts the inclined surface of the annular segment or rib 56.

Going on, then, "Said shoulder being spaced from the lower annular peripheral edge of the member a distance at least slightly less than the distance from that portion of said segment normally engaged by said shoulder, to the proximal upper surface of the cap."

[215] Now, what that is saying is that the spacing from the shoulder to the bottom of the cap is less than the spacing from the point of contact of that shoulder with the inclined surface of the segment down to the top of the red cap 14. I should say before that from the shoulder to the bottom of the blue cap of 40 or hold-down member.

And then going on as to the reason for that: "Whereby said lower edge of the member is maintained out of contacting relationship with the cap when the member is on the retainer in a position with said shoulder in tight seal-

ing engagement with the segment." And that is the setting up in structural definition the fact that it is necessary and desirable and is shown in this structure that when the hold-down cap or member 40 is screwed into sealing engagement so that there is a sealing engagement between the shoulder on the cap and the segment on the retainer, that the bottom of the cap does not contact the top, that is, the bottom of the blue cap does not contact the top of the red cap because if it did, it would interfere with the sealing engagement. If you are going to have sealing between two things, you can't have some other projection which prevents it coming down into tight sealing engagement.

Now, that is the end of Claim 1.

Claim 2 includes all of that, as it states. "A [216] closure assembly as set forth in Claim 1, wherein one of the normally interengaged surfaces of the shoulder and segment respectively is substantially conical to present an inclined annular face coaxial with the member and said retainer and of sufficient diameter at the largest end thereof to cause the seal effected between the shoulder and said segment to become tighter as the shoulder slides on said segment during shifting of the member toward the cap."

Now, as applied to the particular form shown in the drawings, the segment or rim 56 on the retainer has an inclined surface so that as the edge between the surface, the horizontal surface, and the inside circumferential surface, as that edge of the shoulder 50 contacts it, it will slide down and become tighter the further it is brought into contact.

But it should be noted, of course, that the claim calls for one of those surfaces, so that it either be that one of the surfaces on the segment, on the retainer of the incline or the surface upon the cap, hold-down cap could be inclined.

Q. Have you made a study to determine whether or not those mechanical elements 1 and 2 find a response in defendant's commercial structures, for example, Exhibits 30 and 46? A. Yes, I have made such a study.

[217] Q. What did you determine? A. Each of the mechanical elements of Claims 1 and 2 of the Scoggin

Patent 2,870,943 find a response in each of the two commercial structures which we have referred to as Bakan 2 and Bakan 2 modified or indicated by I think you said Defendant's Exhibits 30 and 50, was it?

Q. Of 46. A. 46.

Q. Would you explain to the Court the mechanical elements of the patent in suit if they are present in the defendant's commercial structure? A. As to the first form, and looking at the photographs, Defendant's Exhibits 64 and 70, as I pointed out previously, they are substantially identical as far as anything connected with the elements of these claims is concerned, except that there is a slight rounding at the top of the segment but by looking at the photographs and seeing the curved form which does give an inclined annular surface on the retainer, and considering the way that they come in contact and into the position shown on Defendant's Exhibit 70, I would say that the response to these mechanical elements is the same, substantially identical to that which has been set forth here on this chart because of the close similarity between the commercial structure and the structure shown in the drawings of [218] the patent in suit.

Now, as to the second commercial structure in which there is an inclined surface again on the retainer but on the inside instead of the outside, and instead of just having a flat horizontal surface meeting at a corner with cylindrical surface inside the cap, there is a projection extending down from that in the nature of a projection or shoulder or finger, and as that comes down into the position shown on Defendant's Exhibit 88, I would say that down to and including element 3 the response is the same as it was before.

Q. You are now referring to Defendant's Exhibit 94? A. Yes, element as set forth on Defendant's Exhibit 94, the internal circumferential extending continuous shoulder is in my judgment present in the so-called Bakan 2 modified and is in this projection or shoulder that extends down from the inside portion of the hold-down cap and is that portion which makes contact as it is brought further down with the inclined surface on the retainer. I perhaps should have pointed out earlier that there is still, of course, an

annular continuous segment at the upper part of the retainer above said screw threads and this retainer of Bakan 2, just as it was in the patent in suit in the first form, and that is the portion shown in the upper part of the retainer on these [219] two photographs.

And then coming down to element 5, we still have an inclined annular face on the retainer and on the inside here of the rib or segment 56, as it appears in the drawings, only in this case there is the inside instead of the outside in which the contact is made as between the retainer and the hold-down member. So again I say that each of these mechanical elements finds its response in both commercial forms.

Q. Then so far as Claim 2 is concerned, is it of any consequence that the engagement is on the inside of the rib or segment or on the inner inclined surface rather than on the outside? A. No. Now, I should perhaps point out in connection with these models that in the case of Model 62, it can be seen on the model and this is one of the first commercial structures. You can see that the bottom of the housing member is not in contact with the top of the mounting block when it is in its present position which is a tight-down position shown in the photograph, Defendant's Exhibit 70.

Q. You are referring to a sample of Defendant's Exhibit 62? A. Yes, and, likewise, when we look at the Defendant's Exhibit 80, which is shown in Defendant's Exhibit 88 photograph, you can see that there is a slight clearance so that the member [220] is held up, that is, that the distance from the bottom of this shoulder member to the bottom of the cap is slightly less in its assembled position than the distance from the point of contact on the retainer to the top of the metal cap which would be equivalent to the top of the metal block in these models.

[221] Q. Now, is it your conclusion, Mr. Fishleigh, that all of the mechanical elements of both claims one and two find their response in both of the defendant's commercial structures? A. Yes, that is correct.

Q. Are you familiar with the structure and functioning of plaintiff's accused sprayer and cover cap assembly, for example Defendant's Exhibit 34? A. Yes, I am.

Q. Will you please explain to the Court the structure and the functioning of the accused sprayer and cover cap assembly. A. In order to do that I have prepared several different exhibits that would perhaps be helpful. The first is a colored enlargement of Sheet 1 of the drawings of the Cooprider et al patent, 2,956,509, which has been mounted on the easel and has been marked for identification—

Mr. Conrad: Your Honor, I object to the use of that drawing unless there is some foundation laid that there is correspondence between what is in that drawing and what was put out as the commercial structure of the plaintiff. That drawing was, of course, made, like most patent drawings are, some period of time before the actual structure which it covers was put on [222] the market.

Mr. Schmidt: If your Honor please, I think this witness intends to point out the differences and similarities between that drawing and the commercial structure, and if there is any substantial difference he will make that clear.

The Court: Of course, we are concerned here, so far as the infringement is concerned, with the mechanical—with the structure.

Mr. Schmidt: With the device itself, and he will use the devices as well as this drawing for illustration purposes.

The Court: Well, all right. It will be received subject to the objection.

* * *

[227] A. There is in this Cooprider patent disclosed a hold-down cap colored blue and a retainer member marked 70, generally as 70, and colored here in green, and as in the preceding ones that retainer member is fastened to an extension of the barrel part of the plunger that goes up through the perforation in the metal cap. And in that instance there is an upstanding wall, marked 80, on either side of this retainer, and in—well, next to that, as we go from the outside of the retainer inwardly, there is a depression or a groove and then a continuation of the retainer. Now, in the inside of the hold-down cap there are

internal screw threads as previously seen in the others, and I should say that on the outer surface of the retainer there are screw threads 82. Then there is a member coming down, 90, which I believe this patent refers to as a sealing ring 90, and as the members are brought together as the cap is screwed down into its position that sealing ring and the wall 80 come into contact and slide down one another, as I will show in some detail in a moment, but into a position such as shown in Figure 1 of the patent, and at least as shown in Figure 1 of the patent it is shown that the top of the wall 80 is engaged in what is the top as we see it here, but might be considered the bottom of the groove as between that projecting member 90 and the outer wall of the cap, and likewise that the sealing ring 90 projects [228] down to, as shown on the left side, down near to the bottom of the groove in the retainer ring, and as shown on the right-hand side, down to and touching the bottom of the groove. And in that condition, as shown here rather clearly, there is—that is as far as it would go down—there is a clearance space between the bottom of the blue cap and the top of the red cap, number 12, so that there is no interference as between the sealing of those two portions as a result of any contact or interference of the hold-down member of the blue cap and the red cap. Now, in addition to that sealing, and as I say, I will indicate the detail configuration as it appears in samples of this structure later—but in addition to that, and as has been pointed out, there is a probe seal at the bottom, there is a seal as between the head and the retainer, and there is an additional seal as between the head, that portion of the head around the orifice, and the hold-down member, and in order to operate properly these things should be set up so that all of those seals come into operation, or are in operation at the same time. Now, the seal here between the head and the retainer, that is of the member 70—no, the member 48 upon the wall 76 is a sliding, sort of a sliding contact so that can be, under varying conditions, could seal in various positions to some degree but to a lesser degree there is a [229] possibility for some variation and some expansion or contraction of the parts so that there would still be a seal of sorts down at the ball 22 and the probe member under

some variations, but as shown here on this drawing the device cannot be closed down further than as shown here in the drawing and would require considerably more movement in order to have the space, the clearance space, used up as between the hold-down member and the cap for the bottle itself.

Now, I have prepared further enlargement of a portion of Figure 1 of the Cooprider patent, and—

Mr. Conrad: Your Honor, in fairness to the Defendant, I think I should warn them again that there are differences that effect these claims between what is shown in the patent with which Mr. Fishleigh is now working and the structure that was actually marketed.

Mr. Schmidt: Thank you.

The Court: All right. I assume we are going to get to that.

Mr. Schmidt: Yes, very definitely.

The Court: Very well.

A. In this further enlargement I have merely circled that portion of the structure with which I believe we are particularly concerned here, and I have prepared several [230] models of the accused structure, of samples of the accused structure, prepared in a manner quite similar to the models which we have seen previously. Four of them in various stages of closure. They have been marked as Defendant's Exhibits 102, 104, 106, and 108. And I have also had prepared photographs. These were regular photographs taken, and the particular prints which we have are approximately 40 to 1 magnification over the original. Defendant's Exhibit 110 corresponds to the model 102.

The Court: 110 is 102?

The Witness: That is correct, sir.

The Court: All right.

A. 112 is 104; 114 is 106; and 116 is 108. And on looking first at Defendant's Exhibit 110 we can see quite easily and clearly the retainer at the bottom right-hand portion and the portion of the hold-down cap shown at the left and toward the upper left, and at the left-hand end of the retainer is a projection going up with a rounded top corresponding to the wall 80, what is called in the Cooprider

patent the wall 80. And next to that in the retainer is a groove, unnumbered in the patent, but a groove into which the sealing ring 90 fits as it is brought into sealing engagement. And then at the extreme right of the portion which represents the hold-down cap is a projection or shoulder member called a sealing ring in the [231] patent corresponding to the sealing ring 90 as shown in this Cooprider patent, particularly as shown on the exhibit—Defendant's Exhibit 98—where it is easily visible. It will be noted that at the bottom of that sealing ring 90 and at what would be the inside of the cap to the right edge as we see it in this picture is a further little projection which, as we will see later, comes into contact under certain circumstances with the bottom of that groove. Now, the inner surface of the sealing ring 90 as it exists in this picture and as I have observed it in the samples, that is the surface on the left, that is in one sense it could be said to be the outer surface if you were thinking of it in terms of the inner and outer portion of the hold-down member—but thinking of it in terms of the groove that it is next to, at least I am talking about the left-hand surface of that sealing ring as we see it in the photograph, Defendant's Exhibit 110. Now, that surface is in these models inclined. It is inclined as shown here and as we proceed through the pictures you will see that the inclination increases as the contact is made. This first picture shows the two parts just prior, I would say, to contact or just about contact.

[232] Now, as we go on to 112, we see that there is further contact and as we go to 14 there is still further contact, and I have measured and find that under these circumstances, that sealing ring is bent out more so that the inclination of that surface on the sealing ring is even greater than it was to start with, and in any event if we may go for a moment to Defendant's Exhibit 110, it will be noticed that the rounded corners on the top of the wall 80 and on the bottom of the sealing ring 90 where the two come in contact since it is sort of an annular ring, that in effect it is an inclined surface and performs the same general function of permitting initial contact and tighter contact as the two are brought closer together.

And then going down to Defendant's Exhibit 116, we see a picture in which the two members have been brought together substantially as close together as they can be, and you will note that that little projection at the bottom right of the sealing ring 90 has been flattened out somewhat in this view and does form a definite stop at the bottom.

Now, I have looked at several of these different samples. There are variations in minute detail between them as would be expected with any production items, but I have also examined another sample in which the head [233] and plunger were in place and find that the hold-down cap, the blue member 86, as shown on the Cooprider Patent drawings can be brought down quite easily into a position corresponding substantially to that shown in Defendant's Exhibit 116.

Q. Now again, Mr. Fishleigh, in the samples, Defendant's Exhibits 102, 104, 106 and 108, would you use washers to hold the cap spaced from its lowermost end of its application? A. That is correct on the 102, 104, 106; there is no washer on 108.

Q. Do you also have an enlarged representation of the accused structure? A. I do have, and I shall say, of course, that as far as the movement of these parts as they are shown in the various steps from Model 102 to 108, as far as those steps are concerned, this larger model doesn't show the distortion of the parts because it is made on a larger scale for one thing and out of a more rigid type of plastic so that it doesn't conform too easily but you have a window cut in the side of the cap and one can readily see the configuration of the lower part of the cap with the screw threads in the interior wall and then a sealing ring 90 projecting down with a groove between it and the outer wall of the cap or hold-down member, and then on the [234] retainer member, likewise, we can see an outer wall 80 which threads on the outside of it and then a small groove next to that into which the sealing ring projects as it is gradually brought into sealing engagement.

Q. Do you have with you a drawing of the four photomicrographs, Defendant's Exhibits 110, 112, 114 and 116? A. Yes, we have had drawings made to conform to the

outline of the various parts as shown on the four photographs, 110, 112, 114 and 116, and that composite of the four drawings has been colored and marked for identification as Defendant's Exhibit 118.

Q. Now, will you please refer to the Defendant's Exhibit 118, and particularly the letter "C" that you have added to the drawing, and explain the relationship between the interengaging sealing surfaces? A. Well, that surface "C" as I have already indicated is inclined in its original form as I have observed them on these samples, a slight inclination much less, of course, than in the drawings of the Scoggin Patent in suit but, nevertheless, inclined and also having the inclined arcuate portion at the bottom of that surface, and as the two portions, the member 86 and the member 70 are brought together, that inclination increases from what is shown in Stage 1 to that shown in Stage 3 or, for that matter, in Stage 4, and that is an inclined surface there [235] as well as the other arcuate inclined surfaces in other parts of other portions of the members 80 and 90.

Q. And again the dash lines that you have shown superimposed on each of these four stages are the lines of the instrument used in making the photographs? A. The lines on the ground glass of the instrument that is used and correspond to the lines on the respective figures from which these drawings have been traced.

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[236] HARRY G. AUSTIN, JR.,

being produced, sworn and examined as a witness on behalf of defendant, testified as follows:

Direct Examination by Mr. Morton.

Q. Will you give your name, please? A. Harry G. Austin, Jr.

Q. By what company are you employed, Mr. Austin? A. The James Austin Company.

Q. Where is that company located? A. In Mars, Pennsylvania.

Q. What is the business of that company? A. We manufacture household cleaning products.

Q. Does your company manufacture a window cleaner? A. We do in addition to other household cleaning products.

Q. What is your position with the Austin Company? [237] A. Vice-president and general manager.

Q. Mr. Austin, I have here a bottle marked Defendant's Exhibit 31, which I hand to you, and ask you if you can identify that? A. Yes, this is our window cleaner that is manufactured at Mars.

Mr. Morton: I offer the Defendant's Exhibit 31 in evidence.

The Court: Admitted in evidence.

(Defendant's Exhibit 31 received in evidence.)

Q. Mr. Austin, I now hand you another bottle marked Defendant's Exhibit 33, and ask if you can identify that? A. This is a product that we manufactured prior to the first exhibit.

Q. Is the product shown in those two exhibits a different product? A. They are essentially the same. We did change the formulation here in August of last year in which we added a silicon product to it but basically they are the same product.

Q. About what time did you change the package that that product is packed in? A. The package, you mean this package to this one (indicating)?

Q. Yes, I do. A. October of 1959, I believe is when we made the change.

[238] Q. And when you sold the product in the former package that included no sprayer at all? A. It did not.

Q. What is the source of the sprayer that is shown in the later package? A. This sprayer is purchased from the Bakan Company.

Q. Mr. Austin, what was the price charged for that product while it was sold in the old package? A. In the old package it was 19 cents retail.

Q. What was your price for that package? A. $1.65 a case of 12 20's.

Q. What price is charged for the product in the new package? A. We retail it at 39 cents per case of 12 pints.

Q. And your price for that? A. $3.50.

Q. Was the price change made when the packages were changed? A. It was.

Q. Mr. Austin, would you compare for me the sales by James Austin Company of the window cleaner product that was in the old package and when it was in the new package? A. Well, we introduced this product in 1957 and for the first 28 months we sold about 1700 dozen in the 28-month period. With the introduction of the sprayer we sold over 30,000 dozen the following 28-month period from the time it was introduced until the following 28 months, we sold [239] over 30,000 dozen, so the comparison was 17 as to 30,000.

Q. Mr. Austin, I now hand you what has been marked Defendant's Exhibit 35, a list headed, "Window Cleaner", and ask you if you can identify that? A. Well, this is a sales recap of our sales of the product.

Q. During what period? A. During the period it covers our fiscal year which always ends May 31st, it covers the period 1957 through January of 1962.

Q. Is that prepared from your company's records? A. It was.

Q. Was that prepared by you? A. It was prepared by my secretary for me and is the result of a recap made monthly of the sales of all of our products and given to me and, of course, we maintain a permanent recap of the product by years.

Q. Have you examined this, Mr. Austin, and do you know that it is accurate? A. It is quite accurate.

Mr. Morton: I offer Defendant's Exhibit 35 in evidence.

Mr. Conrad: No objection.

The Court: Admitted without objection.

(Defendant's Exhibit 35 received in evidence.)

Q. (By Mr. Morton) Mr. Austin, when your company changed [240] from the package that is Defendant's Exhibit 33 to the package that is Defendant's Exhibit 31 for the window cleaner, was there an increase in the amount of sales promotion done by your company with respect to that product? A. There was none. We put no effort whatsoever behind the product except the introduction of

the new package; however, since June of this past year we have gone on radio with the item and have experienced a 28 percent increase over the same period of last year.

Q. I understand that the promotion of this product commenced in June of this year but prior to that time there had been no special promotion either in the old or new package? A. None at all.

Mr. Morton: I have no further questions.

Cross-Examination by Mr. Conrad.

Q. Mr. Austin, you were good enough to give me two bottles of your good product and I plan to take them home with me and put them to use. A. Yes.

Q. Mr. Austin, as I look at the product, one of which has been identified as Exhibit 31 and the other as Exhibit 33, the thing that strikes my attention is the radically different appearance of the bottles. What was it that led [241] you to adopt the bottle of the appearance that you now use with your Defendant's Exhibit 31? A. Well, this was the result of a visit by a representative from Cook Chemical who called on us and suggested that we use the spray in conjunction with our window cleaner. He further suggested that we adopt the bottle that had been rather successful with their company, only I think at that time they were using it in amber, this is a clear bottle, and the idea of the lug handles permits one-hand usage of the pump arrangement of the sprayer. You hold it between the fingers and pump with the thumb.

Q. Did you also regard this 31 bottle as a better appearance? A. I think it is a great improvement, labelwise, too.

Q. I mean from a functional standpoint. A. Oh, yes, there is no question about it.

Mr. Conrad: I have no further questions. Thank you, Mr. Austin.

(Witness excused.)

CLARENCE T. FISHLEIGH,

resumed the stand, having been previously duly sworn, and testified further as follows:

Direct Examination by Mr. Schmidt (Continued)

Q. Mr. Fishleigh, I hand you a file wrapper and contents of the [242] Cooprider-Corsette Patent 2,956,509 that has been marked as Defendant's Exhibit No. 122, and ask you whether or not you have heretofore studied the file wrapper and its contents? A. Yes, I have.

* * *

[246] Q. Now, with that background with respect to the nature and construction of the accused structure, I will ask you whether or not you have made a study to determine whether or not the mechanical elements of Claims 1 and 2 of the patent in suit find a response in plaintiff's accused bar and cap assembly? A. I have made such a study.

Q. What did you find? A. It is my considered opinion that each and every one of the mechanical elements of Claims 1 and 2 of the Scoggin Patent in suit find a response in the accused structure, the SS-40 sprayer unit.

Q. Will you please explain to the Court wherein the mechanical elements of Claims 1 and 2 of the Scoggin Patent in issue are found in plaintiff's accused sprayer? [247] A. I have again prepared a chart to clarify and shorten my answer to that question. The chart has been marked for identification as Defendant's Exhibit 120. The left-hand portion of this chart is a photostatic reproduction of the chart which we considered previously, Defendant's Exhibit 94. In the preparation of this present chart we have added a title and column in which there are a number of "Yeses" and which is headed, "Mechanical Elements Found in the Calmar Device". To the right of that block we have added, by way of notes, that the items which in our opinion provide the response for each of the elements and then reproduced the Figures 1 and 2 from the Cooprider Patent and also the drawings which we made of the four stages corresponding to the four models of the accused device.

[248] The introduction—and perhaps I need not repeat the reading of them, because we have been over them before—the first part of the introduction finds a response in this device, which is a closure assembly for a liquid container, the liquid container not being illustrated in these drawings. The "B" portion finds a response in the cap 12, colored red on these drawings and pointed out by way of the lead lines. The "C" portion finds a response in the sprayer, including the barrel 10, colored flesh color, and it does have a portion extending up through the cap, that is the flange 68. The "D" portion finds a response in the tubular plunger 28, colored orange and again pointed out by the lead lines in the 2 view. And the last of the introduction, a spray head, finds its response in the spray head 29, colored brown in these figures, as in the preceding figures of the accused structure.

The first element finds its response in the container 70, that portion of the device colored green, which has screw threads 82 on the outside portion of it. It is telescoped over and secured to the extension above the cap of the—the extension of the barrel above the cap, and it has an annular wall 80, which is in my judgment a response for the recitation of an annular continuous segment at the upper part of the [249] retainer above the screw threads. The second element, a cup-shaped hold-down member, that is the hold-down cap 86, which is colored blue on these drawings, and they have internal screw threads, internal screw threads 84, as shown and pointed out by the lead lines. Then we come to an internal, circumferentially extending, continuous shoulder, and this I will read so that we have it in mind. "Disposed to engage said segment around the entire periphery thereof and thereby present a liquid-tight seal located between the spray head and said threads on the retainer and said member respectively." And I have said that that is the annular sealing ring, and in the various stages of operation as depicted by the four pictures or drawings at the bottom, that member 90, that sealing ring 90, is disposed to engage the wall 80 as shown in these pictures. And then, "Said shoulder being spaced from the lower annular peripheral edge of the member a distance at least slightly less than the distance from that portion of said segment normally engaged by said

shoulder to the proximal upper surface of the cap," in order that the cap not engage, that is, that the hold-down cap 86 not engage the red cap 12.

And my examination of this structure is such that in any position from stage 1, 2, 3 and 4, stage 4 [250] being the maximum that can be obtained before complete contact between these various surfaces, that under any of those conditions the distance from this shoulder to the shoulder of the bottom of the cap is less than the corresponding distance from the portion of the segment engaged to the top of the metal cap so that some clearance is present.

Now, that is all of the elements of claim 1. As to claim 2, the additional element referring to an inclined annular face on one of the inter-engaged surfaces, that is the annular sealing ring 90 has an inclined outer annular face C, that is the face C to which we have previously referred. It in itself is inclined slightly throughout the operation, and not only that, but at its lower end it has a rounded, inclined surface so that in contact with the rounded surface on the top of the wall 80 provides for the type of sealing engagement which is there prescribed.

Mr. Schmidt: I have no further questions.

[251] Cross-Examination by Mr. Conrad.

Q. Mr. Fishleigh, you have covered a good bit of ground in the last few hours. A. Thank you.

Q. And I thought I would indicate to you in a general way the order in which I thought I would take up the various subjects that I want to discuss with you. I have a few general questions first, and then I would like to talk with you about the meaning of these claims that you have been speaking of and then ask you some questions about the nature of the samples that are said to be representative of the accused structure and then discuss with you whether or not the two claims read on the samples. Now, on these general matters, what preparation did you make preparatory to giving the testimony which you have given here today? I do remember you say you had read the Scoggin patent. I wasn't clear on what else you had done. A. Well, I read the Scoggin patent. I have been over the file wrapper, and have been over the prior art.

I have examined a number of samples both on bottles and on pump assemblies such as this Exhibit 40—46—that is in that general condition, both of the accused structures, such as Defendant's Exhibit 34 and of the various Defendant's structures, and then have taken them apart. I have also—

[252] Q. I see. We will get into a good bit of that when we speak about the samples which you used which were said to be representative of the Plaintiff's device. What I was primarily interested in at the moment, Mr. Fishleigh, was whether or not you had studied the prior art which is cited in the file of the patent? A. I have been over that, yes, sir.

Q. Now, have you also studied the patents which the Plaintiff has cited against the Defendant's claim in this lawsuit? A. Yes, sir.

Q. Now, I notice that you found response to the mechanical elements of these claims 1 and 2 in a number of structures which were different in form. A. In some detail, yes, sir.

Q. Yes. A. That is different in some specific details.

Q. So that you regard the claim as a reasonably broad one in that respect? A. I don't think that I would say an extremely broad claim, no, sir.

Q. I see. But you were able to apply it to four different structures which varied in form? A. Varied in some details.

Q. Yes. A. I don't believe that it is one which is restricted, that is [253] that the elements are restricted to the precise things shown in the drawings of the Scoggin patent.

Q. I see. Now, in your discussion of the accused device, I notice you refer to the element 90, I believe it is, as a sealing ring, and I would like to ask you this: Wouldn't you say that a description of the type of seal which you find in the accused structure is pretty well defined in common language by saying that the cap carries a sealing ring which fits into a groove in the collar? A. I have no objection to that language. That is very similar to what appears in the Cooprider patent. I don't think that is for

the details that we are concerned with here, is the final point.

Q. Yes. Well, that would be the normal and common way of describing the sealing arrangement which you find on the accused device there between the collar and the cap. A. That is one way in which the ultimate result can be described.

Q. Yes. And that would be far more the common way to describe the kind of structure which is used to make that seal than, for example, calling one of the elements a shoulder and another one of the elements a segment, would it not? A. Oh, I personally think possibly it would be more common language, but I don't think either one of them, when properly defined, would be wrong.

[254] Q. Now, do you recall any other occasions when you have applied the term "segment" to what you say could be commonly described as a mere groove? A. I don't recall offhand, but—

Q. No, sir, I wouldn't— A. But I don't recall any instance other than this where I applied the term "segment" to just what it is applied to in the Scoggin patent, so that doesn't indicate very much.

Q. That is exactly my point, Mr. Fishleigh. Now, do I understand from the manner in which you read the mechanical elements of the claim that you would not regard as within those mechanical elements a structure which involved an overcap making an internal seal much like is done in the Scoggin and in the accused device wherein the bottom of the cap skirt touched against the top of the bottle cap? A. Well, I think that if it did that consistently, that is, that it would fail to respond to the last element of claim 1. Now, whether or not in some one sample out of a run that might occur, I wouldn't know.

Q. Yes, but putting aside the accidental cases that you mentioned lastly, you would not regard such a structure as coming within the description of the mechanical elements of claims 1 and 2, is that correct? A. Well, I think that it would fail on the last element unless it was in some such way that I just don't think of at the [255] moment that was equivalent.

Q. Yes. Well, just to illustrate the applicability of claims 1 and 2 in that case, I now hold up Defendant's Exhibit 48 and point out to you that I can move this cap down to the point where the bottom of the overcap touches the top of the bottle cap, and I can also back it off to the extent where it does not touch. A. Well, now you have changed the situation, because clearly, if I remember the element—

Q. Excuse me, Mr. Fishleigh, let me finish my question before you set out on an answer. Now, can you visualize one product being made as I first described it and another product being made as I secondly described it? That is, the one in which the overcap is made so that it comes down and touches on the—can be turned down to the point where it touches on the top of the bottle cap. That is the situation in which the internal seals were ineffective to prevent it from touching the bottle cap. Can you visualize that? A. I think I can. That is, that it not only touched but touched sufficiently so that to limit and restrict the amount of movement with the sealing engagement.

Q. Yes. Now, the other situation which I think Mr. Martin described as probably more normal, although I don't find it on Defendant's Exhibit 44, is probably exemplified by [256] the relative position of the bottom of the cap and the bottle top in Defendant's Exhibit 28, is it not? A. Yes, I think—that is not referring to the specific degree of it, of opening, and, of course, as I was about to say before in connection with it, that that spacing takes place when they are in their normal contact. Now, it may be that you can force it beyond that to a place that there is contact between the two caps, and that in my judgment must still come within this element of the claim.

Q. Well, why do you say that? A. Because it—

Q. Doesn't the claim specifically say that the bottom of the cap is maintained out of contact with the top of the bottle cap by the sealing engagement between the rib and the shoulder, and in the instance you have described it would not have done that. A. No, it says that the shoulder being spaced from the lower annular peripheral edge of the member a distance at least slightly less than

the distance from that portion of said segment normally engaged by said shoulder.

Q. Yes. Now read the last clause in the claim, will you, please? A. Yes.

Q. Starting with "whereby." A. Yes. "Whereby said lower edge of the member is maintained [257] out of contact and relationship with the cap when the member is on the retainer in a position with said shoulder in tight sealing engagement with the segment."

Q. Well, do I clearly understand your point that there are some situations in which we can simply ignore that "whereby" clause and that we would have a device which met the mechanical elements of the claim in a situation where the bottom of the overcap skirt did contact the bottle cap? A. No, I didn't say that at all. I said that you might very well have a situation—or at least what I meant if I didn't say it specifically—when in normal contact, in normal position you had such a space but that by applying excessive torque or excessive twist on the cap you were able to push it down beyond normal sealing position and destroy that space between the two.

Q. I see. Now, if you point out to us where in the claim there is any specification of the amount of torque that is to be applied in order to obtain the structure which is described in that claim. A. It doesn't say how much but it says in normal—it says that the position is when it is in—the position from that portion of the segment normally engaged by the shoulder.

Q. Yes. Now let me get this clear. I think this is important, Mr. Fishleigh. Let me get this clear. You have now taken [258] the position that this claim, claim 1, could be infringed by a structure wherein the shoulder and the rib were in tight sealing engagement and the bottom of the overcap was in firm contact with the top of the bottle cap? A. Well, perhaps that is it. I prefer to put it this way: That I believe that you could take a structure which fully meets the elements of the claim or the terms of that last element and then take that and push it on beyond that normal sealing engagement after you had this proper sealing engagement to a position where you would destroy that clearance.

Q. Yes. Very good. Now we come to a very interesting proposition. Since it is your position that this claim might be infringed by a structure in which the bottom of the cap skirt might be in contact with the top of the bottle and also by other structures in which it might not be, how do we go about determining when and—when you do and when you do not infringe the claim? A. Well, you examine the structure in its normal expected condition and note—

Q. What do you mean by normal? What do you mean by "its normal condition"? Is there any normal amount of torque to apply to a bottle cap of the kind we find on Defendant's Exhibit 44? A. I don't know about the Calmar people, but any place that I [259] have known about such things, caps of that kind are applied with a designed torque, plus or minus some tolerance.

Q. Yes, now, give us a figure so we know exactly what kind of torque is involved in order to infringe the claims when we are making a structure as exemplified by Exhibit 48? A. Oh, there is no figure. It might vary from a few ounces in some case to many pounds in another case.

Q. I see. So there is no—there is no way of knowing whether or not you infringe the claim by ascertaining the amount of torque you are applying when you put on this bottle cap? A. No. One might—two structures might respond precisely and their design be sufficiently different that the amount of torque varied widely.

* * *

[260] Q. (By Mr. Conrad) Well, let's see if we can do a little better about getting some kind of an answer to another one of these topics, Mr. Fishleigh. Did you notice in the file history of the Scoggin patent that the applicant said that the novelty of his invention resided in the particular kind of seal he had. A. Well, I don't have that in mind at the moment, but I don't question that it might have been said.

Q. Let me— A. If you will point it out to me I will be glad to agree with you.

Q. We find on page 15, Mr. Fishleigh—I will read it for your convenience—the applicant is referring to claims 1

to 11, which he—excuse me. The applicant has just canceled claims 1 through 15 and had added two new claims, 16 and 17, and he makes this statement, page 15, second paragraph of the remarks: "Said claims clearly point out the novel features of Applicant's hold-down unit whereby the entire assembly is maintained in a predetermined position as shown in Fig. 1 and where the cap and hold-down assembly are rendered leak-proof by the particular manner in which retainer 18 and hold-down member 40 are inter-engaged." And then also on the next page, talking about this seal [261] between the rib and the shoulder, he said: "This seal is particularly provided by the inter-engagement of the shoulder and the rib as pointed out in the claims now remaining in this case and it is believed that such construction is novel to Applicant's device." Doesn't that indicate that the applicant represented to the Patent Office that the novelty of his device was in the particular kind of seal he showed in his patent? A. Well, I wouldn't get that construction. He certainly was saying that in his preferred form as shown it was that particular seal that did it, but I don't think—I wouldn't interpret that to mean that he had in mind that there was no possible modification of it.

Q. Mr. Shipley, of course, in interpreting the claim, reading the mechanical elements of the claim, some meaning must be assigned to these different words that have importance here. Now, one of these, of course, is the word "segment". By the way, Mr. Shipley, are you registered to practice before the Patent Office? A. I am not, and that doesn't happen to be my name, either.

Q. I'm very sorry, Mr. Fishleigh. You say you are not registered to practice before the Patent Office? A. No.

Q. You, of course, have had almost endless experience in dealing with the patents, and perhaps you could tell us [262] how you go about assigning meanings to words which have importance in interpreting the meaning of mechanical elements of the claim? A. Well, primarily I think one works on the basis that a patentee within rather broad limits can be his own lexicographer, and frequently, of course, terms carry a very standard and usual meaning, but if there is any question about it in the

first instance one looks to see what is the structure which is being described, as shown in the drawings of the patent and described in the specification.

Q. Yes. What is the meaning you would attribute to the word "segment" as its ordinary meaning? A. Well, generally—I think here we go more to the general meaning—a portion of a substance or material or structure. Starting out, of course, the so-called—you get a segment of a pie, that sort of thing, or segment of a circle, but also, as in this instance, an annular ringlike portion of the top surface of the retainer, I think that—some part of, as distinguished from the whole.

Q. I see. Now, is the word "segment" used at all in the specification of the patent? A. I don't believe it is. That is my recollection.

Q. Now, do you know whether or not the word "segment" was referred to in the prosecution of the application before the Patent Office? [263] A. Well, I can't tell you that from memory, either. I don't recall it, but I could be quite wrong on that.

Mr. Conrad: Your Honor, I believe you have a certified copy of the file wrapper of the Scoggin patent, which we furnished to you along with the pretrial brief. We plan to mark that in evidence if it is available.

The Court: That may be in my chambers. I expect it is.

[264] Q. Mr. Fishleigh, can you tell us if you have a more or less general recollection from your study of the file history of the Scoggin Patent that the word "segment" is used in Claim 1? It could be substituted by the word "rib" without changing either the meaning or the scope of that thing? A. Well, I would be inclined to think that it could be but I don't have a recollection of any such discussion in the file wrapper. Again, as I say, I don't have this in mind carefully. If you will point to the place one way or the other—

Q. Yes, sir, we are getting a copy of the file wrapper.

The Court: Is that it?

Mr. Conrad: Yes, sir, it is. Thank you very much. Will you please mark this certified copy of the file history of Scoggin's 2,870,943 as Plaintiff's Exhibit E?

(Plaintiff's Exhibit E marked for identification.)

Q. I am handing you a copy of the Scoggin file history which we have marked as Plaintiff's Exhibit E. Will you please turn to page 32 of that file history? You notice in the discussion which appears in the first full paragraph on page 32 that the applicant is referring to the claims which were finally allowed in this application and which now appear in the patent and in the course of that discussion he refers to an annular segment or rib 56? [265] A. Yes, sir, he does.

Q. And then six or seven lines above the bottom of the page he also refers to the "rib or segment 56"? A. Yes.

Q. It appears he is using those terms interchangeably, doesn't it? A. Yes.

Q. And that we could have substituted the word "segment" for "rib" in Claim 1 without changing its meaning or scope? A. I think generally speaking that probably is true.

Q. Now, Mr. Fishleigh, I notice in Claim 1, it states that the container cap or the overcap has— A. May I interrupt just a moment?

Q. Yes. A. O.K.

Q. Claim 1 states that the overcap has a circumferentially extending, continuous shoulder disposed to engage said segment. You see that? A. Where are we now?

Q. In Claim 1 in the description of the shoulder in the overcap. Then it goes on to say that this engagement between the shoulder and the overcap occurs around the entire periphery of the segment, do you see that? A. Yes. [266] Q. What is your understanding of the meaning of the word "periphery" in its common usage? A. I think ordinarily it is the outer edge, the outer circumference.

Q. I see. Now, is there any reason to believe that this word was used in Claim 1 with any meaning other than its ordinary meaning? A. I think that is what they had in mind in describing specifically the preferred structure. That is what they had, I suspect, in mind and that is true in the preferred form.

Q. Well, now, my question was, is there any reason to believe that the word, "periphery" as used in Claims 1 and

2 was meant to carry a different meaning than its ordinary meaning? A. I don't think particularly so, no, although it might not mean that it was restricted to that, that there might not be something else within this context that would be the equivalent. I think they had in mind there the common meaning.

Q. Now, is the word "periphery" which is used in the claim, does it appear anywhere in the specification of the patent? A. Well, I don't recall it. There again it would save time if there is, if you can point it out to me. I don't recall it.

Q. As far as I know, Mr. Shipley, there is no use of that [267] word in the specification with reference to the so-called segment. I am very sorry. I don't know why I have that name in mind so much. I was dealing with a man last week up in New York, and it sort of has an euphonious sound. A. I had that same man the week before down in Memphis and they did the same thing.

Q. They probably did.

The Court: You gentlemen had better be pretty sure.

Mr. Conrad: We have been traveling the same circuit.

Q. (By Mr. Conrad) Mr. Fishleigh, I want you to direct your attention again to page 32 of the file history of the Scoggin Patent. A. 32?

Q. Yes, sir, and since you don't have it I will read a portion of the statement made on 32 about which I just questioned you: "These new patents were carefully studied during the interview and agreement was reached between the Honorable Examiner and applicant's attorney relative to limitations which must be in the claims in order to define novelty over the previously applied disclosure of Lohse when considered in view of the newly cited patents of Mellon and Darley, Jr."

Now, Mr. Fishleigh, I think you will find that the applicant had just cancelled Claim 18 and had substituted [268] for it Claim 25 which eventuated in Claim 1 of the patent and these remarks which I just read to you refer to these changes that were made when you convert Claim 18 into Claim 25. Now, do you recall that that is the case from your study? A. Well, I can recall that with this supplemental amendment which was made following the

previous amendment and without formal office action that the Claim 18 had been cancelled and 25 had been added. I am not as sure as you appear to be that the differences between 18 and 25 were necessarily reflecting what was talked about here, at least not into its entirety.

Q. I see. A. It doesn't say that here at all that that was what was decided.

Q. Well, let's get set up in a matter so we can talk about the thing I have in mind in this respect. We will say that the applicant had submitted Claim 18? A. That is right.

Q. After that he had an interview with the examiner? A. That is right.

Q. Following that he presented Claim 25? A. Yes.

Q. There are some differences between 18 and 25? A. That is correct.

[269] Q. And sometime after the interview he also wrote the following to the Examiner: "These new patents were carefully studied during the interview and agreement was reached between the Honorable Examiner and applicant's attorney relative to limitations which must be in the claims in order to define novelty over the previously applied disclosure of Lohse when considered in view of the newly cited patents of Mellon and Darley, Jr.".

Now, can you see any reason why the applicant would have changed Claim 18 in any respect if the Examiner had found it was in satisfactory condition during this interview? A. I am merely speculating, of course. I don't know what happened, but I have seen other instances where similar changes were made, where allowed claims had been amended to, well, more properly in the eyes of the counsel would describe the invention. I don't know that, but certainly I have seen that sort of thing in many file wrappers.

Q. Yes. Now, in those situations to which you refer, was there also a statement made by the applicant to the effect that the agreement was reached with the Examiner relative to the limitations that must be in the claims in order to define novelty? A. Not in the one I happen to have in mind.

[270] Q. Well, in any event, Mr. Fishleigh, there were some changes made? A. That is right.

Q. And on the whole you can recognize by an examination of Claim 18 and Claim 25 that Claim 25 was the amended version of Claim 18? A. Oh, there are certain portions of it certainly which are identical.

Q. The majority of the language in the two claims is identical, is that not true? A. That is correct.

Q. Now, I want to point this out to you, Claim 18 contained the following limitation— A. (Interrupting) Will you wait a minute until I locate that?

Q. Yes, sir. Mr. Fishleigh, for your convenience I will have marked in evidence a paper on which Claim 18 and Claim 25 are written side by side.

(Plaintiff's Exhibit F marked for identification.)

Q. By handing you that paper it may be a little more convenient for you to use. Now, will you please look at Claim 18 as you have it written there and about ten lines down you will notice it states, "The combination with said spray unit of an annular retainer secured to and surrounding the extension above said cap." Do you see that? [271] A. Yes, I note that.

Q. Now, directing your attention to Claim 25 which later became 21 of the patent, do you see that the corresponding portion of the claim was changed to read, "The combination with said spray unit of an annular retainer telescoped over and secured to the extension above said cap"? A. Yes.

Q. Now, you notice therefore that what happened was that the words "telescoped over" were inserted before the word "secured" in Claim 18, and the words, "and surrounding" in Claim 18 were cancelled out, it would thereby bring about the language as it now appears in Claim 1? A. I see that difference, certainly.

Q. Now, what is your explanation of the significance of that change in language whereby "telescoped over" was added to the claim which was allowed by the Examiner? A. I have no explanation of what was in their minds or what they did or why.

Q. And have you no explanation of the meaning of that change? Didn't you take in account when you were in-

terpreting the claim the fact that the language in this respect had been changed and that the claim was only allowed after the language was changed in this manner? Can you tell us right off if you took that into consideration when you were testifying a moment ago? [272] A. I think I hadn't paid too much attention to that particular sentence.

Q. Now, will you suggest to us the significance of the change which would, of course, take into account what is said about the manner in which this retainer and the barrel extension are assembled in the specification itself and also in the amendments which were filed in the Patent Office? A. Well, it perhaps is a little more specifically accurate as a description of the precise form shown in the drawings.

Q. That explanation doesn't take into account what is said about the relationship between these two parts in the specification nor does it take into account what is said about the relationship between these two parts in the course of the arguments made to the Patent Office. Now, can you give us an explanation which takes those factors into consideration? A. No, I don't see any myself, any substantial necessity for the change.

The Court: Let's take a recess.

(Whereupon, a short recess was taken.)

Q. Mr. Fishleigh, you explained to us just before we recessed that you attach no particular importance to the change in this language from "secured through and surrounding" to "telescoped over" in the description of the manner in [273] which the retainer was mounted on the barrel extension. I am going to suggest to you that is a significant change and is one of the changes the applicant referred to when he said he and the Examiner had agreed upon certain changes that must be made in order to define novelty. I suggest to you, Mr. Fishleigh, that in the specification of the patent with respect to the description of the barrel extension and retainer secured thereon, it is said that one of the purposes of not having the skirt of the overcap touch the cap collar is that so that the retainer will not be stripped off the barrel extension when the cap is screwed down. Do you recall that? A. Yes.

Q. I also remind you that in the course of the argument of the claims before the Patent Office the applicant stated

that the importance of this clearance at the bottom of the cap skirt was to prevent the hold-down member, meaning the retainer, from being forced against the cap whereby the retainer would be pulled upwardly into the hold-down member and the retainer dislodged from its position on the cap, which in turn would result in the barrel being dropped from its position of retention by the retainer 19? Do you say that that appears at pages 15 and 16 of the file wrapper? A. On pages what?

[274] Q. 15 and 16 of the file wrapper, at the bottom of 15 and the top of 16. A. Yes.

Q. Now, isn't it a fact that what the applicant is telling the Patent Examiner there is that the reason for this clearance is to prevent this retainer from being pulled off of the barrel? A. That is what he is saying there. That is one of the reasons.

Q. That is also, is it not, the only reason given in the specification itself for having the clearance at the bottom of the cap skirt? A. Well, I think that may be true.

Q. I refer you to Column 2 of the Scoggin Patent beginning at line 58, and direct your attention to the following where it says: "A downwardly-facing shoulder 50 within the cap 40 engages the upper surface of retainer 18, thereby preventing engagement between cap 40 and closure 14 to prevent forcing of the retainer 18 from its tight press-fit engagement with extension 22." A. That is correct.

Q. Now, is there any other reference in the specification to any other function of that clearance at the bottom of the cap skirt other than what I have just read which relates to the retainer not being stripped off of the bottom? [275] A. I don't believe it is specifically referred to, no, sir.

Q. Mr. Fishleigh, I therefore suggest to you that the change in the description of the manner in which the retainer was secured to the extension from "secured to and surrounding" to "telescoped over" as it appears in Claim 25, was to bring out the fact that the functional limitation which appears as the last clause in the claim was meaningless unless it was included in a description of the device in which the retainer was capable of being stripped off

of the barrel extension by contact between the top skirt and the bottle cap. Do you accept that suggestion as a reasonable one explaining the significance of this change from "telescoped over"? A. I have no question as to whether or not you suggested. That doesn't impress me of being of any particular importance, no, sir.

Q. Well, it is an explanation which does make reference to what is said about the relationship of the retainer in the barrel extension in both the specification and in the amendments that were made to the original application, does it not? A. Yes. Again what?

Q. I say it is an explanation of the change which was made from "secured to and surrounding" as it appeared in Claim 18 over to "telescoped over" as it was pled and allowed in [276] Claim 1 which does take into account what is said about the relationship of those two members, that is the retainer and the barrel extension in both the specification and in the amendments filed in the Patent Office? A. Well, frankly, I don't see that one is particularly different than the other; both of them in the light of the specification and the drawings to me they are substantially the same thing.

Q. Mr. Fishleigh, don't you agree that "telescoped" gives the connotation of being able to pull apart or extend like you extend a telescope? A. Oh, it has been, not that it necessarily can any more, but "surrounding" does, too, so far as that is concerned.

Q. But "telescoped" is more specific and describes the relationship of two elements which may slide in respect to one another? A. It has slid at some time, perhaps.

Q. What would be the point as stated in the specification of having a clearance at the bottom of the cap skirt in order to prevent the retainer and the barrel extension from pulling apart if they could not in fact telescope in that manner? A. Probably none, but I don't read into that other language in Claim 18 that that describes the structure which could not pull apart and whether or not it would telescope.

[277] Q. Now, with respect to what is disclosed in the specification, would there be any meaning whatsoever in the last limitation of Claim 1 calling for the clearance,

if that clearance weren't in connection with a structure where those two elements could pull apart? A. As to just the specific thing which you have referred to as specifically set forth in the specification, no; from the standpoint of the sealing, yes.

Q. Exactly. Now, in your interpretation of the mechanical elements of the claim I gather from what you said earlier that you did not take this suggestion which I have made into consideration? A. Well, I think I could agree with that because I still see no substantial difference between the two.

Q. I see. But you yourself can offer no other explanation which takes into account what is said about the relationship of those two elements in the specification and in the amendments? A. Well, perhaps the telescoping may be a little clearer to use if it were out in the open but in the light of what was here, the other language in that respect, it certainly is quite specific so far as I am concerned.

Q. Let me ask you just one more thing on this whole matter. I pointed out to you that the specification explains that this clearance at the bottom of the cap skirt is for the [278] purpose of avoiding stripping the retainer off of the barrel extension. You agree with that? A. That is stated in the specification; you read it.

Q. There is nothing in the specification which states that the purpose of that clearance at the bottom of the cap skirt is for permitting you to make a more effective seal? A. It is not specifically set forth, no, sir.

Q. Mr. Fishleigh, I direct your attention to Defendant's Exhibit 120, which is mounted on the board to your right, particularly to the four small figures in the lower, right-hand corner of that exhibit. Now, I also direct your attention to the fact that in each of those four small figures, the sealing ring 90 is shown as being disposed at a slight angle with respect to the element which you have marked 80? Do you see that? A. Yes.

Q. Now, in your opinion would you find the mechanical elements of 1 and 2 in which the ring 90 was parallel to the axis of the element 80? A. And with a sharp corner at the bottom.

Q. Let's assume that these figures showed 80 coming down into the groove 88, coaxially of that group rather than at the slight angle, would you consider such a structure as being described by the mechanical elements of Claims 1 and 2? [279] A. As long as it had the circular formation on the bottom, I think it perhaps would. Now you say it would be moved over coaxially so that it never contacted it.

Q. Yes, it would go straight down into the groove 88 rather than approaching it at an angle as it does in these four figures. A. Well, but the critical part as far as I am concerned is that they do come in contact rather than as you have been talking before telescoping without contact.

Q. I see. Well, let's assume that it came in coaxially, that element 80 came in coaxially with the groove even though it may contact the groove on one side or the other, would that structure in your opinion be met by the mechanical or be within the scope of the mechanical elements of Claims 1 and 2? A. I can't see where it could come in coaxially if it did contact it.

Q. Mr. Fishleigh, perhaps I can make it clear if I point it out. You see the 90 here. You see it disposed at a slight angle with respect to the outer wall of the groove 88? A. That is right.

Q. Let's assume rather than being disposed at that angle, that element 90 came straight down into the groove 88. A. Well, as far as that particular point, possibly not. [280] However, if it came down so that there was this contact such as there, if it was in the relationship there, but then went straight up, I think it would still come within the element of the claim.

Q. There is something that I want to ask specifically. The element 90 defines a cylinder with vertical walls and also the groove 88 is provided with vertical walls and that the ring 90 or the cylinder 90 comes straight down into the groove 88. Do you understand? A. Yes. So there is no contact between the two.

Q. Now, there might be contact, Mr. Fishleigh, depending on the width of the ring 90 as compared to the width of the groove 88? A. Well, I think there might be some

question under those circumstances as to that additional element in Claim 2. I believe that probably the first of the elements of the first claim would be met.

Q. I see. The point is that with respect to Claim 1, the mechanical elements would be met even if the ring 90 were perfectly cylindrical? A. Provided they do engage as it calls for.

Q. And that one wall of that cylindrical ring engaged the element 80? A. I think that perhaps is true.

Q. Now, in that structure last described by me there would, [281] of course, be no wedging action between those two elements, would there? A. Well, I suspect not until you got to the bottom of it.

(Plaintiff's Exhibit G marked for identification.)

Q. Mr. Fishleigh, I am setting up before you where you can see it now a model which we have marked as the Plaintiff's Exhibit G, which purports to represent the device shown in the Scoggin Patent in suit and in which there are certain parts that are made movable with respect to one another so that the manner in which the seal is made between the retainer and the overcap can be demonstrated. Will you examine that, please, and tell me if you think that fairly represents what is shown in the drawing of the Scoggin Patent? A. Well, as near as I can tell in a quick glance, it seems to follow somewhat close to it. I don't know about this movable business or what happens.

Q. Now, Mr. Fishleigh, while we are here together, I wonder if you would point out to me on this model the portion of the overcap which you regard as the shoulder which was mentioned in Claims 1 and 2? A. Well, yes, I would say the portion here which would include the horizontal surface, that is, it is bounded by the horizontal surface and extends up some part, a rather indefinite part, but extends up into the wall.

[282] Q. On the basis of what you have pointed to me, I am going to attempt to place a piece of white tape over the portion of the overcap which you have specified. Now, have I placed the tape over the area with respect to which you have testified? A. Oh, very, very roughly.

[283] Q. Well, I will give you an opportunity, if you will please do it for me, after we recess for the evening, to do that more exactly, but that does roughly indicate the area you have indicated? A. Generally speaking, that area or portion of the structure.

Q. Yes. Now, that is what you regard as the shoulder 50, which is referred to in the specification of the patent? A. Well, I think 50, yes, goes to and is pointed out as the bottom surface of that shoulder.

Q. I see. Now, will you point out to me the portion of the retainer which you regard as the segment in the Scoggin structure? A. Well, this little part above the horizontal surface of the main—top of the main body.

Q. I see. I will now attempt to cover the portion of the retainer which you have pointed out as being the segment, with yellow tape. Now, have I done that in conformity with your directions? A. Yes, I would say generally. Certainly it is this portion from the horizontal line up to the top (indicating).

Q. Now, Mr. Fishleigh, I noticed in connection with your designation of the so-called shoulder that you have included an area which is bounded by that inner wall of the upper part of the cap. Is that correct? A. As a part of it, yes.

[284] Q. I notice that the—I notice that that area of the shoulder would not be a downwardly facing surface, would it? A. Well, but that area of the shoulder has a downwardly facing surface.

Q. To the extent that that shoulder includes this inner wall of the cap right in here (indicating), that is not a downwardly facing surface, is it? A. That is correct.

Q. Yes. Now, how do you reconcile your designation of what you have designated as the shoulder when in the specification in the patent it refers to a downwardly facing shoulder 50? A. Well, I still say it is a downwardly facing shoulder, just as my shoulder is an upwardly facing shoulder, but it isn't limited to just this line (indicating). There is more to it, but still it is an upwardly facing shoulder.

Q. Well, following that example along, do you regard any part of your arm, which is hanging down from your

shoulder, as part of your shoulder? A. Well, not necessarily the arm, but certainly my shoulder and shoulder blade goes more than just the upper surface of my coat.

Q. Well, Mr. Fishleigh, referring to column 2, line 58 of the Scoggin patent, were you under the impression when [285] you read the statement that the shoulder 50 was downwardly facing, that it also included a portion of the inwardly facing inner wall of the cap? A. Well, I am under the impression that it is not limited to the surface.

Q. Yes. A. The surface of it is, and he later speaks about the edge between that lower surface and the inner cylindrical wall, but in my understanding of it, the shoulder itself is a structure rather than a surface.

Q. Well, have you taken into consideration in making that answer that beginning at line 77 the specification says, "In addition to the seal provided between shoulder 50 and the top surface of the retainer 18 there is established an additional seal, additional annular seal, between the annular rib 56 and the annular surface of cap 40 immediately adjacent to the shoulder 50." Now, if we take your definition of shoulder, as you have illustrated on this model, then we can't make any sense at all out of that part of the specification which I just read, can we? A. Well, I'm sorry, I can if you can't.

Q. Well, perhaps you can explain this to me, Mr. Fishleigh: It tells here that an additional seal is established between annular rib 56 and the annular surface of the [286] cap 40. A. Yes.

Q. Now, is that something distinct from the seal which is established by the shoulder 50 and the top surface of the retainer 18? A. Well, it is described as distinct, and you might have that at a time that you didn't have the previous one. They are very closely allied. One is the bottom surface itself, and the other is the rim at the edge of the bottom surface.

Q. Let's follow this language through, Mr. Fishleigh. It says, first, "The downwardly facing shoulder 50 within the cap 40 engages the upper surface of the retainer 18." A. That is correct.

Q. And that is this portion (indicating)? A. That bottom surface is engaging the upper surface where you are now pointing.

Q. Which is outwardly of the segment? A. That is correct.

Q. Now, it says, "in addition to the seal provided between shoulder 50 and the top surface of retainer 18." A. That is correct.

Q. Now, that is the seal we just described, isn't it? A. That is right.

Q. "There is provided an additional seal between the annular [287] rib 56 and the annular surface of the cap 40." Now, that would be the seal between this part here and the rib here, would it not (indicating)? A. Well, going on, yes, immediately adjacent at the point where that contacts.

Q. Yes. Well, the specification then speaks of this part in here, which you have designated as part of the shoulder (indicating), as an annular surface of the cap 40 immediately adjacent to the shoulder? A. Yes.

Q. So you are referring to something which is said to be adjacent to the shoulder as part of the shoulder, are you not? A. Oh, I don't think so.

Q. Well, Mr. Fishleigh, from the testimony you gave in the last few minutes here, I don't see how you can make that statement. A. Well, I have no confusion about it other than we can twist the language if we want one way or the other. The first seal he is talking about is the lower surface of that portion as shown on your model and the top portion here (indicating). The next one is between this inner surface and the inclined portion of the segment. Now, that is what he is talking about.

Q. Yes, exactly. [288] A. And there is no misunderstanding on my part as to that, and it is perfectly consistent, in my mind at least, with my position that there is something more than a mere surface when _____ talks about the complete definition of the shoulder.

Q. Yes. Now, Mr. Fishleigh, you will grant me this, will you not: That in this portion of the specification about which we have just been talking, "the annular sur-

face of the cap 40 immediately adjacent to the shoulder 50" is something which you refer to as part of the shoulder 50, is it not? A. It is the surface of the part, the annular surface of the part—the surface of what I refer to as the shoulder, yes.

Q. In other words, the answer to the question is "yes"? If it is, that will terminate this discussion on this point. What is your answer? A. It is the surface of what I—part of the surface of what I refer to as the shoulder, that is correct.

Q. Well, I think this is rather important, Mr. Fishleigh. I would like to have the question read again, and, if possible, I would like to have you give me a "yes" or "no" answer, and any explanation which you wish to make.

(Question at line 6 read.)

A. Well, if you insist on a "yes" or "no", I guess I will have to say "no", because in one case I am referring [289] to a surface, and another case I am referring to a structure.

Q. Now, in the event that you referred to the shoulder 50 as a surface, then I assume the answer would be "yes"? A. No, I think in that case the answer would necessarily still be "no", rather clearly so. If I limit the shoulder to the lower surface 50, then it would be still definitely no.

Q. Mr. Fishleigh, will you direct your attention to claim 2 of the patent, and you will notice that it says in that claim, "A closure assembly as set forth in claim 1 wherein one of the normally inter-engaged surfaces of the shoulder and segment, respectively, is substantially conical to present an inclined annular face," et cetera. Now, what I am interested in is the statement in the second line of the claim where it refers to "normally inter-engaged surfaces of the shoulder and segment, respectively." You will notice that that refers to claim 1? A. Yes.

Q. Now, what are the normally inter-engaged surfaces which are referred to in claim 1? A. Well, for one, I believe that they are referring to the one side, the outer side of what has been referred to as the segment. And on the other side, that portion which [290] interchanges with that—it may at some time be rather a line contact and some other time somewhat more than that.

Q. Mr. Fishleigh, what I was getting at was where in claim 1 at all does it refer to any inter-engaged surfaces? A. I think it does in element 4.

Q. What is the language there? A. "An internal circumferentially extending, continuous shoulder disposed to engage said segment around the entire periphery thereof."

Q. The word "surface" isn't used there, is it? A. Oh, no, not specifically.

Q. Where do you find in the specification any reference to a surface of the shoulder 50 being in contact with anything other than the top of the retainer 18? A. Well, I find that particularly in the drawings, where it is shown there, and in the reference that you read me a little while ago to the—well, the second seal, which it refers to.

Q. Now, with respect to your finding it in the drawings, that depends on interpreting the shoulder as you have on Plaintiff's Exhibit G, does it not? A. As I have where?

Q. As we have it marked on Plaintiff's Exhibit G? A. Well, interpreting it as a part of the structure rather [291] than just the bottom surface of that structure.

Q. Well, finding it in the drawings does depend on that. Now, with respect to the specification, where does it say anything about a surface of the shoulder 50 being in contact with the segment 56? A. Well, specifically it doesn't, but that passage at the bottom of column 2, particularly when taken in conjunction with the paragraph over in column 3 beginning in line 15 about a compression of one member, would indicate that you would end up with a surface contact rather than line contact.

Q. But it doesn't say that. A. No, it doesn't say it —doesn't refer to those words.

Q. Yes. Now, with respect to the statement at the bottom of column 2, it says, "The annular surface of the cap 40 immediately adjacent to shoulder 50" is what contacts the rib 56, does it not? A. That is what it says, yes, sir.

Q. Now, where does it say that the annular surface of the cap 40 immediately adjacent to the shoulder 50 is

part of the shoulder 50? Where does it say that? A. Well, it doesn't say that in so much language.

Q. As a matter of fact, it doesn't up a little earlier indicate that it could not be because the annular surface is a vertically facing surface whereas the rib [292] of the shoulder is described as a downwardly facing shoulder? A. Well, I don't think that that follows at all. That is, it may be a downwardly facing shoulder. For instance, I have a house which faces east, but it is still—and I might describe my house as an eastwardly facing house, but it still has north-and-south walls and west walls as far as that is concerned.

Q. Well, with reference to the description of the direction which your house faces, of course we refer, as everyone would understand, to the front of the house, wouldn't we? A. That's right, but it wouldn't indicate that I had merely a front wall standing up; it would indicate that I had a house of some substance. And, at least as I see it, this shoulder business indicates or connotates something more, perhaps, than just the surface itself.

Q. I see. Well, that really gets down to the point, doesn't it, Mr. Fishleigh, that your interpretation of these claims depends on your interpreting the so-called shoulder as involving more than the downwardly facing surface which exists between the inner wall of the cap and the larger diameter which is coaxially spaced from the smaller diameter to the top? A. I think perhaps that is fair, that, at least, I consider it to encompass more than just the surface alone.

[293] Q. Now, in that case you consider it to encompass more than what is specifically described as the shoulder in claim 3 of the patent? A. I think that they are again talking specifically about the surface.

Q. Yes. In that claim the shoulder is described as a surface? A. In other words, in my judgment they could perhaps better have said—although I don't think it is inconsistent at all—the surface of the shoulder.

Q. I see. But what they actually described was what I have been calling the shoulder, that is the downwardly facing surface right there (indicating)? A. That's right.

Q. And the shoulder as it is described in that claim, at least, certainly does not include any part of this inner wall? A. I think, as I just glance at it quickly here, I think that perhaps is correct.

Q. Yes. And if this is a proper description of the shoulder, it would be at odds with what you have indicated as the shoulder on Plaintiff's Exhibit G? A. I don't think so at all, no, sir.

[294] Q. Well, Mr. Fishleigh, we get right down to what seems to me to be the logical conclusions, and then in my opinion you refuse to draw the conclusion. Now, didn't you tell me just a moment ago that claim 3 described a surface as the shoulder? A. Yes, the surface of the—described what I consider to be the surface of the shoulder. They call it the shoulder, and that is quite commonplace, I think.

Q. What it does describe there, that is that downwardly facing surface, is said in the claim to be "said shoulder," referring to the shoulder mentioned in claim 1? A. Yes, that is correct.

Q. And as described in claim 3, it consists only of a surface? A. I think that is—

Q. That is the downwardly facing surface on which I— A. I think that is correct, as it is specifically set forth in claim 3.

Q. And that is said to be "said shoulder" in claim 3, meaning the shoulder referred to in claim 1, is that correct? A. Well, I think that probably is correct.

Q. Yes, and it doesn't say— A. I haven't checked to see that it says "said shoulder", but if you say it does I assume it does.

Q. I assure you it does. I direct your attention to the fact that it doesn't say that what is defined in claim 3 is [295] "a part" of said shoulder. Now, that being the case, that definition is at odds with what you have defined as the shoulder, which must necessarily include some part of that inner wall of the cap. A. Well, again I am right back where I was. I don't think it is at all. Sometimes one might speak—and in this instance they are clearly talking about—a surface, and in part of the specification they

talk about it as the surface. More accurately I believe they should have said the surface of the shoulder. But clearly that is the downwardly facing surface in that instance.

Q. Well, do you also have in mind, Mr. Fishleigh, that at the top of column 3 of the patent it says—I'm sorry, the sentence to which I want to refer you begins at the bottom of column 2 and it says, "The cross-sectional contour of rib 56 is as shown in Fig. 2 to present an upwardly and inwardly inclined annular face which snugly fits against the 'corner' or line of juncture between shoulder 50 and the adjacent annular inner face of cap 40." A. That is correct.

Q. Now, doesn't that indicate to you that the inner annular face of the cap 40 is not part of the shoulder 50? A. Well, as he is talking about it there, again he is talking about the surface, and there is no question that as between the surface and the inner surface it does form a line of [296] juncture and that is a very convenient way to refer to it.

Q. Yes. Now, this description in the specification at the top of page 3 is also at odds with your designation of the shoulder in Plaintiff's Exhibit G. A. No, I don't see that it is at all in that in the belief that in talking about it that a shoulder can be more than a mere surface.

Q. Mr. Fishleigh, where it says that there is a line of juncture between shoulder 50 and the adjacent annular inner face of cap 40, wouldn't that commonly mean that the annular inner face of cap 40 is something different than the shoulder 50? A. Well, as far as those particular surfaces are concerned, yes.

Q. Well, now, in making your definition of the shoulder in Plaintiff's Exhibit G, you have included the inner face of the cap 40 as part of the shoulder, where here it indicates that it is not part of the shoulder, and as a matter of fact there is a line of juncture between the shoulder 50 and the adjacent annular inner face of the cap 40. A. That is correct.

Q. Well, perhaps we can conclude this if we get this straight: In your designation of what constitutes the shoulder, as you have illustrated with reference to Plain-

tiff's Exhibit G, it includes a part of the annular inner face of the cap 40. [297] A. Well, a part of the inner face of the cap 40 is the inner surface of part of that shoulder, yes.

Q. Very good. And it was on that basis that you were able to read the mechanical elements of claims 1 and 2 on the accused structure? A. Oh, I don't think that I am strictly limited to that at all.

Q. Well, was it on that basis you were able to read the mechanical elements of claims 1 and 2 on the Scoggin disclosure? A. No, I don't think it is on that basis at all. I have pointed out how I read them fairly clearly. It has no comparison, direct comparison at least to what we have just been talking about.

Q. Well, do I understand then, Mr. Fishleigh, that when I asked you a little earlier to cooperate with me in putting a tape on that Plaintiff's Exhibit G so we could see what you understood to be the shoulder, that you put that tape on at a place over an area to indicate the shoulder which was different than the area that you were considering to be the shoulder at the time you were reading these claims on both the accused device and also on the Scoggin device? A. No.

* * *

[299] Q. Mr. Fishleigh, I direct your attention to the models which have been marked Defendant's Exhibits 102, 104, 106 and 108, which I have placed to the left of you, and the photographs marked 110, 112, 114 and 116, which apparently are photographs of the respective models. Will you explain to us how these models were prepared? A. Yes, I will be glad to do that. Samples of the material of the structures were taken. They were cut off first just below the cap and the head taken out, and then the metal cap was cut off and that portion of the barrel up into the collar retainer was milled out with a small hand mill, and then the collars were fastened to these little pieces of blocks, little blocks of tooled steel with Allen headset screws or screws. The caps were then placed on the collars with washers under them to hold [300] them at different positions, that is, so that when the caps were put on to a different extent they would stay in place and

then the windows or cut-out portions were cut out with hand mills again.

Q. I see. Who was it who did that work? A. That was done out in Kansas City here at, I think the Ace Tool & Die, I believe that is the name of it.

Q. When was this done? A. The early part of last week.

Q. You said samples were taken. What do you mean by that? A. Well, Mr. Scoggin furnished me with samples from some that they had purchased as I understood it on the open market. I didn't follow those back. I don't know the origin other than hearsay on that.

Q. Well, did you understand that when these caps were applied and made in the models that the caps were then actually being threaded on the collar for the second time? A. I think that is possible, yes.

Q. Do you know what torque was used to thread on the cap? A. No, sir.

Q. Now, is there any one of those models or photographs supposed to represent the exemplified structure in its condition when the seal between the overcap and the collar is established? A. Well, I think that all but one of them do represent that to [301] some degree or other, the seal becoming progressively more extensive when the cap is screwed down, one type of seal being shown in the photographs, Defendant's Exhibits 112 and 114, and then 116, Defendant's Exhibit 116, the cap is on tight enough to produce another seal at the bottom of the groove.

Q. Well, referring now to the photographs, which one of them shows the seal between the collar and the overcap in what you would call a liquid-tight seal? A. I think that 114 and 116 and perhaps 112.

Mr. Conrad: I will ask the reporter to mark as the Plaintiff's Exhibit H, Patent No. 2,715,480 to Livingstone, and as Plaintiff's Exhibit I, Patent No. 2,763,402, to Livingstone.

(Plaintiff's Exhibits H and I marked for identification.)

Q. Mr. Fishleigh, may we return for a moment to the matter of how the samples were prepared, that is, the Exhibits 102, 104, 106 and 108. Do you know if the caps

were cut at the same time as the collars were cut in making those samples? A. That is my understanding, yes, that they were cut in the condition in which they are now and have not since been removed although some people have handled them now, at least they hadn't been removed after or before the photographs were taken. Now, many people have handled them [302] since. I couldn't vouch for them being in that same condition.

Q. Do you know with what kind of a tool the cut was made? A. It was made with a very small end mill.

[303] Q. Mr. Fishleigh, I would like to ask you some questions with reference to your interpretation of claims 1 and 2 of the patent in suit, and also with reference to Figure 8 of Livingstone Patent '480, which has been marked as Exhibit H. Do you have a copy of that patent? A. Yes, I do.

Q. I have a loose copy here I can let you use. What I would like to do, Mr. Fishleigh, is to ascertain whether or not the interpretation of claims 1 and 2 as you have presented it to us with respect to both the Scoggin patent, the accused structure and some of the Bakan devices, isn't also equally applicable to the prior art represented by Figure 8 of this '480 Livingstone patent. Now, do you recall yesterday that Mr. Schmidt and I more or less agreed that the pump proper here wasn't really essential to our consideration of the matter of the seals made here which we have been discussing with reference to claims 1 and 2? A. I heard some discussion about that.

Q. Mr. Fishleigh, let me—in order to make our consideration of these other patents a little clearer, just take this out of the model G.

Mr. Conrad: And, your Honor, after I do remove this central pump section from model G, I would like to have this model then photographed and marked in evidence as Plaintiff's G-1.

[304] The Court: Very well.

Q. (By Mr. Conrad) I also have here, Mr. Fishleigh, an enlargement of Figure 8 of the '480 Livingstone patent to which we might make reference in order to make our comparisons a little easier. Now, let me ask you as a pre-

liminary if you have studied the Livingstone '480 patent in connection with your preparation for the trial? A. Yes, I have studied it.

Q. You recognize, then, that the spout which is shown in red and to which I am now pointing is a spout which is held down, that is depressed, when the overcap 37 is applied to that structure. A. Yes, it is a pouring spout.

Q. But this cap 37 does function to hold that down when the cap is on? A. To depress it slightly, as is shown there in that figure.

Q. I am now pointing to the area of the cap 37 at the point where the lower end of the internal diameter is expanded to a larger diameter. Do you see that? A. Yes.

Q. Now, is this area in here between those longitudinally spaced sections of different diameter (indicating), what you would call a shoulder? A. I think so, yes.

Q. That would correspond to the shoulder which we have [305] designated over here on the model of the Scoggin patent? A. Well, it has some similarities. At least, I would call it a shoulder.

Q. Yes. Now, I am now pointing to the top part of the member which is colored light green and designated, I believe, by the numeral Do you see that? A. Yes.

Q. Now, you notice there is a slight section of that that extends above the uppermost screw thread on that collar? A. Yes.

Q. Now, could you designate that as a rib or segment on that collar? A. Well, on that member, yes, but not on—on that particular member it could be considered to be a—

Q. A rib or segment? A. Top wall.

Q. Yes. Now, do you observe that a seal is established between this collar, which is light green, and the shoulder of the overcap when they are brought into engagement with one another? A. Yes, sir.

Q. By threading the overcap down on the collar? A. Yes, sir.

Q. Do you also observe that there is space beneath the bottom of the overcap and the top of the container cap, the [306] latter being colored black? A. Yes.

Q. Now, isn't that space sufficient to enable one to turn the cap down and establish a tight seal between what we have designated as the shoulder of the overcap and the upper portion of the collar? A. That is correct, but it is not the situation that you called my attention to yesterday of prevention of pulling that what you call collar, that light green member, up and away.

Q. Yes. Well, insofar as the matter of pulling the retainer off of the barrel extension, that would only be a problem in a device such as illustrated in the Scoggin patent where the retainer was not cemented to the barrel extension, is that correct? A. Well, where there was a possibility of pulling it off, either where it had been cemented but not sufficiently to resist the pressure or—

Q. Do you know whether that is a problem of any practical importance whatsoever in the manufacture of any of these spray devices? A. I don't think it is, because I think in all cases the clearance is there so that the matter is avoided in the first instance.

Q. Yes. Now, just with respect to the matter of providing [307] a space between the bottom of the overcap and the top of the bottle cap in order to permit turning the overcap down to the point where a liquid-tight seal is established, we do have such structure in this Livingstone patent Figure 8 which we have been just discussing? A. Yes, sir.

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[310] BAXTER I. SCOGGIN,

being produced, sworn and examined as a witness on behalf of the defendant, testified as follows:

Direct Examination by Mr. Schmidt.

Q. State your full name and address, please. A. Baxter I. Scoggin, 1223 West 66th Terrace, Kansas City, Missouri.

Q. Tell us of your educational background after graduation from high school. A. I took a degree in Engineering from Oklahoma University and I had some additional business training.

Q. By whom are you employed? A. Cook Chemical Company.

Q. In what capacity? A. I am a vice-president in charge of production.

Q. How long have you been with Cook Chemical Company? A. About nine and a half years.

Q. Immediately prior to coming with Cook, what did you do? A. I was with an oil company.

Q. What were your duties? A. I was in charge of the research and development department.

Q. And prior to that? A. Prior to that I was in school.

Q. What do your duties with Cook include? [311] A. Well, they include the management of all the producing units of the company and I have had various and sundry duties since I came with them.

Q. What do your producing duties include? A. That includes both the packaging of the insecticides, the manufacture of sprayers.

Q. Those duties commenced when you first started to work for Cook? A. When I first started to work for Cook I was in charge of installing a refinery for the production of deodorized solvent and the base of an insecticide.

Q. Did your duties subsequently expand into the matter of manufacturing and production of sprayers? A. Well, they did in about 1954 on.

Q. At the time you commenced working for Cook Chemical Company, was the company manufacturing any type of sprayer devices? A. They were not.

Q. What did you do insofar as getting the Cook Chemical Company into the sprayer business? A. Well, I contacted two makers, molders, and made a design, and experimental mold and final mold, designed assembly equipment, etc., for the production of sprayers.

Q. Did you have anything to do with putting the plant into production? A. Absolutely. That was one of the major portions of getting [312] a sprayer into production was having assembly equipment.

Q. Were those duties primarily and solely yours? A. Primarily.

Q. Ultimately when did you get the first plant into production to manufacture sprayers? A. It was in production I believe about January of 1956.

Q. That first sprayer that was manufactured by Cook, did it have any type of hold-down cap or member? A. It did not.

Q. Did it have any means to provide a so-called leak-proof assembly with the bottle? A. It did not.

Q. Were you called upon by your employer in any manner to look into the question of an integrated sprayer? A. Well, the problem of an integrated sprayer that could be shipped had been voiced quite often around Cook Chemical ever since I came with them in 1952, and even when we started thinking about manufacture of the sprayer, the people in the company wanted to make it leak-proof then.

Q. Did anyone in the company ask you particularly to look into the problem? A. Well, it was always somebody who was saying—

The Court: A little louder, if you please.

A. There was always a number of people that knew the need for [313] such a sprayer and were always asking why not make it leak-proof and finally sometime in 1956, we developed some ideas along that line and finally Mr. Martin located some experimental molds.

Q. Did you yourself make any suggestions to Mr. Martin or anyone else at Cook that perhaps you might be able to solve the problem? A. Yes, I did, even before we had the first sprayer, I thought there was a possibility—I didn't know exactly how—but all the possibilities I could think of cost so much money that we couldn't afford to experiment on them at that time.

Q. Tell us what your first thinking was with respect to how you believed the problem might be solved. A. Well, I always thought it had to have an overcap that would seal someplace and preferably on a collar, something that would be definite and accurate.

Q. When did you initially for the first time conceive the idea of using a covercap of some type that would seal on the collar? A. Well, I was thinking about that for a number of months. We thought of different ways that I

might solve the problem and I would carry sprayer parts around in my pocket to the extent that my wife wanted to know why did I have all these papers in my pocket, trying to fit them [314] together and visualize different ways that they might be sealed, and I think the first time I made any inquiry as to overcap was sometime in June, May or June of 1956, I asked the tool and die maker how much it would cost to make a mold with a drill of some kind.

Q. Who was the die maker that you made that inquiry to? A. Mr. John Albert, Albert Tool & Gage.

Q. Did you discuss with him the ideas that you had in mind at that time? A. Yes, I told him that barring any other possibilities, I couldn't think of any means of sealing except with an overcap.

Q. Did you detail to him how you contemplated utilizing the overcap for the purpose you had in mind? A. No, sir.

Q. Did you indicate to him .what you had in mind insofar as sealing was concerned? A. Well, I told him that I wanted some kind of an overcap that could seal someway, someplace, and I was primarily interested in how much an overcap would cost, how much the molds would cost to produce them, because it would have to be a special cap of some kind.

Q. As you developed your discussions with Mr. Turner, did you say? A. Albert.

[315] Q. Did you get any suggestions insofar as cover caps are concerned? A. He told me that at that time at the tool shop he was working on a mold that belonged to Injection Molding Company and that it was an automatic mold, that was something that he thought they could produce a cap at a low cost with an override of that type and he suggested that I see him concerning the cap.

Q. Did you do so? A. Not right away. I kept procrastinating and one time Mr. McGruder of the Injection Molding Company was in our plant because he was furnishing, his company was furnishing us suction tubes for these sprayers, the part that is here (indicating).

Q. The part that goes into the bottle? A. The part that sucks it, yes.

Q. That was in respect to Bakan 1 sprayer? A. That is correct.

Q. Did you ultimately contact Mr. McGruder? A. Yes, at a later date we were having some—his plant was a long ways from ours and at a later date we were having some difficulty in the way these tubes were cut; they were shattering, they were sharp and could cut people, so he was trying to devise a way of making a sprayer cut and he called or something and in our discussion he [316] said he had such a device and he was going to run some of these tubes and he asked that I come out and inspect them.

Q. Do you remember approximately when that was? A. That was either the latter part of July or the first of August, somewhere along in there.

Q. Of what year? A. 1956.

Q. Did you at that time disclose to him what you had in mind with respect to a hold-down cap? A. After observing the cutting of these dip tubes, well, it so happened that his excrusion machine that he was making those on was in the same building with the injection molding machines, and during my inspection of the tubes I noted that these machines were running automatically, there were several machines there running automatically, and it so happened those were the first automatic molding machines I had ever seen, so I went over and inspected the machines and the product and asked him how much he would charge us for a cap that we could use to seal our sprayer.

Q. Did you tell him or show him what kind of cap you had in mind? A. Well, he asked if I had a drawing of exactly what I wanted and I told him, no, that I did not but that I could get some samples, some samples of the sprayer and show him exactly what I thought we wanted.

[317] Q. Samples of the Bakan 1 sprayer? A. Yes, the disassembled samples of the Bakan 1 sprayer and we did get those samples, I am not sure if it was the same day, but I came back and we went over exactly what I wanted and I asked that it be a thread that could be attached to the collar and someone brought up, did we want it the same size as the collar we had on the No. 1 Bakan

sprayer and I said, no, it would have to be large enough that the cap could come over the head, it would have to be a larger collar, and he said, "Well, how large would it be?" I said, "Here are the parts. You can measure them and caliper them." And he said they would make a drawing. We made some sketches in his office or in a conference room of some kind of how we wanted them attached. Well, there were several problems that came up. One was, he asked why we didn't attach it to the cap, and I told him I didn't know any commercially available cap that you could attach it to, and then he brought up, why not make this a plastic cap. I didn't think about it at that time but we thought about this under cap; he wanted to make that a plastic cap. I told him we had considered that but that such a cap would cost several times as much as a metal cap would.

Q. You mean a container cap? A. Yes.

Q. Molded out of plastic? [318] A. Yes.

Q. Onto which the cover cap might be attached? A. Well, he was talking about one that possibly could be attached but we never could figure out how.

Q. Did you disclose to Mr. McGruder what you had in mind at that time? A. I told him that the only way I had been able to figure that we could seal would be to seal on the collar, a collar big enough and seal on that collar and if he could think of any other better way of sealing, I would be glad to think of it, but that was the only way I could think of.

Q. Now, at a subsequent date in the fall of 1956, what efforts did you make insofar as samples are concerned to devise a seal and provide an overcap that was attached to the collar? A. Well, we had experimental molds with various and sundry ways of doing it. In the first place, this first inquiry with Injection Molding, Mr. McGruder was apparently transferred out of town and we didn't hear anything from him for a while and finally when we did, we had a quotation on this cap that it seems to me was something like $25.00 a thousand, which was as much as our entire sprayer material was costing and I thought maybe these screw caps are no good. Maybe we had better try something else. [319] So I again went to Albert Tool

& Gage and discussed it with Mr. Albert and we had several conferences at luncheon and what not where we discussed the possibility of a mold where we could have a snap-on cap, something that could snap all the way over, something that could snap all the way over the container cap and seal so that the sprayer could be shipped in the bottle.

Q. You were thinking of enclosing the container cap within the cover cap? A. Yes, that was one possibility and that type of mold would be rather inexpensive, if we could get one that would seal, so that was the purpose of experimental molds, and we tried several experimental molds. The first one we had was a tall one, because we —well, we just said a certain dimension. We didn't have any good reason for it being tall, but the sprayer was up tall and it would fit over the cap, but when we tested it, it would leak. We went ahead then and changed that mold several times. Finally we got one that was tight enough, and in so doing we finally brought the size of the mold down. I think the samples are here from my deposition that we had on those, and when we did get one that would seal, we couldn't get it off. We broke the sprayer trying to get it off, so we decided that wasn't a good idea, and then immediately we started on experimental molds to make a collar, a screw [320] collar and a cap. At that time we were reminded that with polyethylene we could have a cap that wouldn't need to have a rack mold, we could jump the thread, that when that pulls out and jumps, and that kind of a mold was about one-third of the cost of the so-called rack mold, so we set up experimental molds for this type of device.

[321] Q. And what type of device did you ultimately come up with? A. This was a screw collar and a cap, the cap that is shown in the patent, the square cornered cap was the experimental cap, and we made that several different ways and changed it from time to time, and when we got one that would fit we assembled it and packed it in bottles of Real-Kill and shipped these packages of Real-Kill around the country. We would put half the bottles one way and half the bottles the other way, and shipped them maybe to one coast and back and around quite a

way, and then bring them back and examine them for leakage. And we kept on doing that and modifying the cap slightly from time to time until we—oh, it must have been the latter part of '56 before we finally decided to go ahead and try to manufacture a sealed-in sprayer with an overcap that could be shipped with insecticide.

Q. Now, you spoke of "the patent." Did you have in mind your patent, Exhibit 10 here in suit, Defendant's Exhibit 10? A. The Scoggin patent, yes.

Q. Now, you are down to about December of 1956, is that correct? A. Somewhere along in there. November or December.

Q. Now, subsequent to that what did you do by way of further [322] work on either the overcap or on the collar before you ultimately filed your patent application in March of 1957?

* * *

A. Well, I had many different experiments. For instance, one of the early weaknesses was the fact that the collar and its attachment to the barrel wasn't strong enough to stand shipping, so we enlarged that portion, we enlarged the barrel and made it heavier so that it would withstand shipping stresses, and we continued to occasionally have some seepage from a flat collar that we had at that time. Well, there had been so many people that said why not seal it on the cap—I had always objected to that, because these metal caps are flimsy, cheap things, they cost two dollars a thousand or something like that, they are not very strong, and they are distorted quite a bit when they are put on a bottle. I could never see how we could seal on something like that. But just to explore it, to keep from [323] being hard-headed, we did try to put a rim on the bottom of the cap, and I think one of the caps like that is in Exhibit 7 or 9 of my deposition. We tried putting that on and shipping it. Well, we not only had leakage but we had—some of the collars after the solvent from the insecticide or something softened that collar of the bottle seal, some of those—when they returned, some of the—the whole top part of the sprayer and all was apart, and we hadn't—we didn't have as good sealing against leakage as we had had before.

So then we took that same mold and cut this rim off the bottom, kept it from touching the cap, and shipped it again, and it showed the best results. There was still some seepage. So from an engineering standpoint I knew that to have—to prevent leakage where there is maybe vapor pressure like there might be in an insecticide that is made out of oil, we needed maybe more surfaces to seal and some kind of a wedging action. So sometime—oh, in January or—it was either December or January—I decided that we would have to have a rim around the top there.

Q. December 1956 or January 1957? A. Right. And we had fairly good results with the flat seal, but in my opinion it hadn't been good enough. [324] So when the patent went to Mr. Hovey, I mean when we discussed it with him, we inserted some ridges on top of some of the drawings we already had, telling him we didn't have that part made then, but that was what we intended to do.

Q. Did you instruct Mr. Hovey to include as a part of your invention— A. I did.

Q. —the seal of which you just now spoke? A. I did instruct him.

Q. Are you familiar with the patent that ultimately issued to you? A. Well, quite a bit.

Q. Have you read it? A. Yes.

Q. Have you studied the drawings of that patent? A. Yes, quite a bit.

Q. Will you tell us whether or not from your study of the patent it does, so far as you can determine, disclose what you had in mind in either December or January, as you have just testified? A. It discloses at least the general principle of what I had in mind, particularly concerning the overcap and the seal.

Q. Now, what did you have in mind that the overcap would do other than seal on the collar? A. That it would be a protective cap, protect the sprayer [325] against breakage during shipment. What we normally think that a package, like a bottle there, when it is put in a corrugated case, that the case protects it. Actually when you ship something, ship a bottle in a corrugated case and like in a shipment of a car load or truck load and there are six

cases one on top of the other, well, actually the case on the bottom is supporting the ones on the top and they come down, and it is the bottle and the cap and all supporting the cases above it, so it takes quite a bit of weight, and it is the bottle itself, package itself, that supports the weight, not the case.

Q. Now, what is there in the collar or in the cover cap that absorbs that weight that you are speaking of? A. Well, we had the vertical sides fairly thick, and we made them vertical at first so they would support as much vertical weight as possible. And I have already spoken of the fact that we made the collar, this body or portion of this barrel, we had to enlarge it to give it more strength all the way around (indicating).

Q. Now, after filing of your application in March of 1957, did you in fact then proceed in an effort to commercialize your ideas? A. That is correct, we did. We had decided to go ahead with commercial models before we filed for the patent.

Q. Approximately when did you come on the market? [326] A. I believe it was August '57.

Q. Did you make any tests at about that time insofar as shipment of the product was concerned, to determine whether or not your ideas were satisfactory? A. Well, we made a number of tests along then. In the first place, all of these molds, there had to be a lot of new molds, and they had to be fitted together, and then as soon as we had one model of the cap—incidentally, when we started in production of the cap the sales department wanted it to have more style, so we took the square corners and things off, and after it was redesigned in that manner we made some tests, and certain phases of the cap were a shade too weak. We had to add more material so that we could get the seal.

Q. Did you ultimately make any tests in shipment that were successful? A. Yes, we did. By along the latter part of July we had all the molds and everything, and we had tested, successfully shipped the material, and sometime in August then we made a shipment of the finished sprayers to our packaging plant and started packaging Real-Kill in it for regular shipment.

Q. This was 1957? A. 1957, that is right.

Q. Did you continue with that form of your ideas? [327] A. We used that sprayer, oh, probably at least 15 million of those, maybe more than that, from '57 through '58. We even used some of them as late as '59, maybe some of them even in '60. I don't remember that last part, but even after we started using other models we still used some of those.

Q. Now, we are talking about Bakan 2, is that right? A. Bakan 2.

Q. When did you start thinking about Bakan 3? A. Well, after we started manufacturing Bakan 2 we had a number of people that wanted to be customers of ours. We had designed this original Bakan 2 primarily for Cook Chemical, and everything about it was to fit into machinery that Cook Chemical had. So sometime in '58 we started shipping to some other customers, and our sales department began to contact other people, and we started having inquiries for a sprayer that could be used on a 24-millimeter overcap, a smaller bottle like in the cosmetic field and a number of others. We had used 28 and 26 millimeter caps, which is just about the diameter of this sprayer here. Some of them wanted smaller caps and wanted to use it on smaller caps, and we could manufacture it on smaller caps, but their capping machinery wasn't such that they could install it. In other words, many of them had what is known as a chuck-type capper that came over the top, [328] and it would come over and contact this overcap but wouldn't contact the lower cap, so they had difficulty using it. That hadn't been a problem with Cook Chemical because we had machines that we could arrange to hit both the undercap and the overcap, and in fact some of the things about the original cap, like having a thread that was real steep gradient, we originally intended to push that on, to pop that down over the threads of the collar, and we designed the machine—we have it down at the plant—that was to push that over and just pop it down, and then after the sprayer was put into the bottle we had these rotary wheels—those who are familiar with capping machinery, there is a capper known as a Resina capper. There are many others similar on the market,

but it has rubber wheels on each side, they go in reverse, and we had two wheels that would tighten the bottom or the container cap and one that would tighten the top cap or the overcap.

Q. Simultaneously? A. Simultaneously, on the same machine.

Mr. Conrad: Mr. Schmidt, the last question you asked Mr. Scoggin made reference to Bakan 3. I think you may have in mind Bakan 2 modified, is that correct?

Mr. Schmidt: I suspect that is true, [329] although I will clarify it with this witness, yes.

A. What is that?

Q. (By Mr. Schmidt) Go ahead. I'll get that later. A. The reason I brought that up, there had been a cry from the sales department to get a narrower cap, one that was not so broad so that it could be used on these others, and so the packaging machinery of the customers could use it. We considered that, but there would be quite a bit of mold cost, and then later on—I'm not certain, I think it was in '59—'58 or '59—by the time we began to get competition on the overcap from Calmar Company, the sales department wanted a narrower cap that some of the other customers could use, and Calmar had done quite a good job of selling all the internal seals, and our sales department wondered if we couldn't have some internal seals, too, so we started thinking about both problems at the same time.

Q. Now, Counsel has kindly called my attention to the fact that—

The Court: A little louder, all of you, please.

Q. (By Mr. Schmidt) —that I said Bakan 3, whereas I meant Bakan 2 modified. A. Well, we decided in connection with solving the size of the cap problem, that we would design a cap that could be used [330] on the Bakan 3. That is the reason I went into both of those. And incidentally, one of the reasons that this first cap is this size (indicating) was not only the reasons I gave before. It fit our machinery and our cap. But also at the time that we started making overcaps, so-called super polyethylene or linear polyethylene, the hard material that these are

made out of, it was available in samples but no one would guarantee to be producing it in time for us to go into production with it.

Q. By "these" you mean Bakan 2 modified? A. Well, by "these" I mean Bakan 2. We would like very much to have used linear polyethylene in this (indicating) in the first place. We even tried molding some other parts from—there were other parts that we could make out of linear polyethylene, and there was a number of companies in the U.S.A. then that had samples for tests, but no one had production machinery, they couldn't guarantee us delivery, so we used what is known now as a regular polyethylene, normal polyethylene, the type that most squeeze bottles were made of at that time.

Q. Let me clarify this for the record. Are you saying that by the time that you had got to working with the Bakan 2 modified that a new material was then available to you? A. Yes. It was in production shortly after we came in production with this (indicating), but no one would guarantee [331] us that it would be in time that we thought we would start in production here.

Q. Now, you used that new material in Bakan 2 modified? A. That is right.

Q. And what did you do in Bakan 2 modified that you did not have in Bakan 2? A. Well, in the modified type we were able, since it is a stronger material—you can see it is hard and this other is soft—it was a stronger material, we could reduce the outside diameter quite a bit and still have enough strength to seal. It also had more resistance to oil, to solvency action of the oil base of the insecticide than the other type did, so we were able to take a lot of material, a lot of the beef, the heaviness along here, we were able to take it out, because it is a stronger more resistant material.

Q. The heaviness in the overcap at the base? A. At the base, around where it touches the undercap, the container cap.

Q. Very well. Now, by virtue of that new material, you were able to seal in Bakan 2 modified in a manner different from the way in which you sealed in Bakan 2? A. That is correct. We had considered that way, but

with soft polyethylenes and oils in insecticide they wouldn't hold, the collar wouldn't hold.

[332] Q. And did you come on the market with the Bakan 2 modified? A. Yes. It seemed like the collar mold, which is the part in green there (indicating), the new mold for that portion, and the cap mold came—I think we completed those molds sometime the latter part of 1959.

Q. And went into production yet that year? A. I think we did. Maybe December or something.

Q. Were you clearly in production by 1960? A. Yes. That is the smaller cap for the model 2.

Q. Now, let's go one step more, and tell us about the Bakan 3. What did you do in that regard? A. We had considered a Bakan 3 that would—again we wanted the smaller cap to facilitate use in lots of industries that required small caps—and then since some of our customers had been taught about internal seals, we wished to establish some internal seals, and one way of sealing was to have a diaphragm or something in the top of the—the top of the head, and have something from the cap that would push down on that head, and we were a little concerned about that, because if that works the customer can't put the—can't always get the sprayer cap back on the sprayer. If he takes it and pushes it down like that, this cap would tend to seal up there if he pushes it in a hurry, it would just lock there with the liquid in there.

Q. You mean the ultimate consumer, the housewife? [333] A. Yes, if they wanted it back on there, and it would require pushing this down and slipping it over like that or something (indicating), or pushing it slowly without too much pressure so it wouldn't seal, so we asked the sales department to contact some of the customers to see if that—what the customers thought about that. Well, as I remember, they came back, the customers liked that because it was a way of proving that it sealed.

Q. Now, did that tend to discourage the housewife from attempting to put the cover cap back on? A. Well, if she puts it on a certain way there, it would. I think there was one time that we may have had instructions to throw away the cap. At least some of our customers did, in the

first place, but, see, when you put it down you would fill it with material.

Q. In any event, the Bakan 3 with the diaphragm about which you are now talking— A. Right.

Q. —did not differ from the Bakan 2 modified insofar as the cover cap and collar are concerned? A. Well, the cover cap had a knob or an extension inside that—

Q. That contacted the diaphragm, yes. A. Yes, that came down.

Q. But aside from that? [334] A. This Exhibit 50 is the type head it has, and inside it has a diaphragm and there is a knob in here that pushes down on that, and seals against this plunger.

[335] Q. Now, aside from that, sealing between the knob and the diaphragm, the Bakan 3 and the Bakan 2 modified are the same, are they not, insofar as the cover cap and the collar are concerned? A. Other than the knob, they are exactly the same.

Q. When did you get into production on the Bakan 3? A. Oh, we started trying for production on that early in the spring of 1960. We didn't complete all the molds at the same time. This head mold is a very expensive mold and had many, many parts, had a multiple cam action in two or three ways. As I remember, it was finished sometime in February or March. We completed only one cavity at a time at first to test it to see how it would work.

Q. But you did get into production in 1960? A. As I remember, we actually used some maybe as early as June, maybe a little earlier, but we, as I remember, we didn't have what we called satisfactory production until maybe July or August of 1960.

Q. Did you continue to produce the rest of that year and then in 1961? A. That is correct.

Q. Are you producing it today? A. Yes, we are.

Q. You say that the Bakan 3 has completely taken the place [336] of the Bakan 2 modified? A. Not at all. Some of our largest customers prefer the Bakan 2. Actually from my viewpoint of production, I think the Bakan 2 is as good as the new.

Q. What is the production? Are you selling more than one? A. I tell the sales department that we manufacture Bakan 3 with all these internal seals just for salesmen and purchasing agents, that they like to look at all these things and think they are important, but actually in the United States you can't ship a thing that is so dangerous to people that it will hurt them to get a little on their hands. If there is a little in the cap and actually when you get the internal seals, if you should have one of the seals leak into the cap, then the one at the bottom will hold and will not drain back, but in the Model 3 it will drain back—I mean the Model 2, it will drain back and usually does, but if anyone uses one of these sprayers, regardless of what product they use it on, I have seen very few people who were so neat that they didn't get some on them, and so from a practical standpoint I have never seen any great advantage of any seals other than the seal on the collar and the cap to keep the material within the package.

Q. Are you familiar with the volume of production? [337] A. Well, I can't quote exact figures.

Q. Generally speaking. A. But, generally speaking, we are still producing in the millions of Model 2; in fact, I think we had maybe one customer that uses one million and he took it and started using it after we had Model 3.

Q. You also are producing in the millions with respect to Bakan 3? A. Yes.

Q. Approximately how many are produced each day? A. Well, normally, without a lot of extra shifts, about one hundred to one hundred ten thousand per day of any given model.

Q. Is that today? A. Yes.

Q. Does that continue day after day? A. Right, sometimes.

* * *

Cross-Examination by Mr. Conrad.

Q. Mr. Scoggin, when did you say was the earliest date at which you had some kind of a drawing or some kind of a [338] written description of the idea of making a seal between the retainer and the overcap, I mean for putting

a web on the retainer such as shown in that model that is at your right? A. Well, as I remember it, from the exhibits we had at the deposition, which included all of the old drawings that we kept around, as I remember there was an exhibit that came from Hovey's office where the rims had been added to a former drawing.

Q. I now show you what was marked in your deposition as Exhibit 48, and ask you if this is the drawing you refer to? A. No, that isn't the one. That may be an earlier one, I don't know. I forgot about that one.

Q. Well, do you recall the date on which you made this drawing which you say you had sent to Mr. Hovey? A. I remember there were two copies of essentially the same drawing in the deposition file. One is 39 and one is 37, and 39 is identical with 37 except that it has the ring on it. That was the drawing that was given to the patent attorney for drawing up the patent.

Q. I think I have found it. I now hand you a one-sheet drawing and ask you if this is the drawing you have just referred to? A. Yes, this is my sketching on it.

[339] Q. Is this the earliest sketch you made of the idea of some kind of a rim attached to it? A. That is the first time it was given to the Patent Office, I know that, and I forget just the date of the 38 you gave me there. I would have to look at it.

Q. Before we do I will mark in evidence the document which you have just identified which was Exhibit No. 39 in the Scoggin deposition as Plaintiff's Exhibit J.

(Plaintiff's Exhibit J marked for identification.)

Q. Again returning to you, Mr. Scoggin, the paper that is marked "Scoggin Deposition Exhibit No. 38", do you wish to examine that again and tell us if you can if that was made before or after the sketch which is now Plaintiff's Exhibit J? A. I don't remember.

Mr. Conrad: Now, will you please mark the paper about which Mr. Scoggin just commented, that is Scoggin Deposition Exhibit No. 38, as Plaintiff's Exhibit K, please?

(Plaintiff's Exhibit K marked for identification.)

Q. Mr. Scoggin, I again return to you what is now Plaintiff's Exhibit K, and ask if it isn't a fact that in that drawing the bottom of the overcap skirt comes down into con-

tact with the top of the bottle cap? A. Apparently it does. [340] (Plaintiff's Exhibits L and M marked for identification.)

Q. Mr. Scoggin, I have just had marked as Plaintiff's Exhibit L, a two-page memorandum and as Plaintiff's Exhibit M, a one-sheet drawing which was formerly Scoggin Deposition Exhibit No. 37. I now hand those exhibits to you and ask you if you can tell what they are? A. Well, the first Exhibit 37 is another copy of the Exhibit 39 that we had in our hands a moment ago. I have forgotten what number you gave it here, but the other one has the ridges added. This is one without it.

Q. What is the date of that drawing to which you are now referring? A. It looks like February 11th.

Q. In which year? A. '57. This one is cut off. I think the other one shows it better.

Q. Can you make out the date, "February 11th"? A. I get it from the other one. It is the same one.

Q. Now, what is the other exhibit which I have handed you? A. This is a letter from Chet Turner addressed to me and to Roland Rhodes, and it goes over the various changes to be made in sizes and whatnot of various parts after we had decided to go into commercial production of Model 2.

Q. Does the memorandum which you are now referring to in its [341] text refer to Plaintiff's Exhibit M, which is the drawing? A. I don't remember whether it does but there are certain changes here that had to do with modifying the shoulder and whatnot and it probably does.

Q. You can tell from the dimensions referred to in the memorandum, Exhibit L? A. Yes.

Q. It does refer to this drawing which is Exhibit M? A. Yes.

Q. Now, this drawing, Exhibit M, was made on February 11, 1957, and it shows a retainer which does not have any kind of a sealing rib on the upper surface? Did you observe that? A. I did. That is the reason it was changed before it went to Hovey.

Q. I see. And in that event it went to Mr. Hovey sometime after this date? A. Probably about the same date.

As I remember, something about February 11th, we had scheduled a conference to plan commercial production of Model 2 and I know that this conference was between me and Chet Turner and Roland Rhodes may have been in it, too, since his name is there. I don't remember. And during that conference we were referring to that drawing.

[342] Q. I see. Now, I notice in the Plaintiff's Exhibit L, under Paragraph "B", "Collar (Ring)." "2. Consider placing a ridge on top of collar to act as seal between collar and cover cap." A. Yes.

Q. Do you recall that? A. Yes.

Q. And did you eventually do that? A. Well, this memorandum was something that we eventually intended to use as a basis for discussion with the tool maker and if such a rim could be put on there, we wanted to do it. That is what we meant.

Q. Such a rim was eventually put on as indicated in the patent drawing, for example? A. When we made the commercial drawings we put it on, yes, sir.

Q. Just what were the circumstances that led up to your making and filing the application for patent which resulted in the '943 patent? A. I am not sure I understand what you mean by "circumstances".

Q. Well, did you some time have an idea that you wanted to get some patent protection on an overcap idea that you had and then cause a search to be made in the Patent Office records? A. I am sure we had some searches made but I think we didn't— [343] we had been considering this idea for several months in making an experimental mold and when we started to spend enough money to go into commercial production, we thought we should have patent protection, if possible.

Q. Were these searches made before you filed your patent application? A. I don't remember that for sure.

(Plaintiff's Exhibit N marked for identification.)

Q. Mr. Scoggin, I hand you what appears to be a letter written on your behalf to Mr. Hovey, which has been marked as Plaintiff's Exhibit N. Do you recognize it as such? A. Yes.

Q. Do you observe that this letter is dated January 14, 1957? A. Yes.

Q. You say in the first paragraph of the letter, "It has been decided that we go ahead and make the patent application for the plastic cap and screw collar for our plastic spray"? A. Yes.

Q. And then you go on and say in the third paragraph, "You will note that we no longer have the device for making the liquid drain back into the bottle"? A. Apparently that letter confirms that he had made a [344] search before. We had tried having a device, or a hole so that the liquid would drain back into the bottle but it wasn't practical, it didn't work. When it would drain back it would spill out on the spray.

(Plaintiff's Exhibit O marked for identification.)

Q. Mr. Scoggin, I have marked as Plaintiff's Exhibit O one sheet of drawing that bears the date October 5, 1956. I am going to hand that to you and ask you if you can tell us what that is? A. This is one of the experimental drawings, a part drawing in connection with experimental mold for a collar and overcap.

Q. Now, do you have that drawing available prior to January 14, 1957, when you wrote to Mr. Hovey? Do you know whether or not you supplied that to Mr. Hovey before the patent application? A. I am not certain whether it was a drawing or an actual sample of the device from these molds.

Q. So it might have been this drawing showing this or it might have been a device you made up from such drawing? A. Yes.

Q. Now, I notice in this drawing which we have just identified as Plaintiff's Exhibit O, that the bottom of the overcap comes in contact with the top of the bottle cap. Did you observe that? [345] A. Yes, we made it that way on purpose. We wanted to try it. And as I mentioned a while ago we wanted to try something and see what could be done so far as sealing on the cap and we could cut something off of the parts, but we couldn't add it.

Q. Do you have or are you aware of the existence of any other drawing with the kind of a cap explained in Plaintiff's Exhibit O, that shows a clearance beneath the rim of the overcap prior to the date of October 5,

1956? A. It seems there were others in the deposition file. I don't remember for sure.

[346] Q. Now, I notice in your letter to Mr. Hovey, Plaintiff's Exhibit N, you stated that you "plan to be out of Kansas City all during the week starting January 14, and therefore I would like to discuss this patent application with you sometime during the week of January 21." Do you recall having a discussion with Mr. Hovey about this patent application during the week of the 21st? A. I don't recall exactly where it was. Sometimes we had our discussions at luncheon, and sometimes he came to our office, or sometimes I went to his office. I don't recall exactly when we got into that with him.

Q. But do you remember having a discussion with him that week? In that connection, Mr. Scoggin, I will let you examine this sheet of paper, which was furnished to us as purporting to be a record kept by the draftsman in Mr. Hovey's office. A. Apparently I did see him, because he has a draft dated here January 22.

Q. Yes. Do you remember talking with the draftsman and showing him what it was that was to be depicted in the drawings of the patent application? A. Not specifically. I may have talked with Hovey.

Q. I see. Now, what was the next transaction in your dealing with Mr. Hovey concerning this matter of getting a patent application on file? [347] A. Well, sometime along there he wrote the patent up, and we discussed it some. There had been several discussions maybe after that 22nd date there.

Q. I see. A. As I remember, I probably talked to him about this ridge actually in February.

Q. Yes. A. I don't remember how long it took him to make an initial draft.

Q. Well, did you get your draft of the application before or after you talked with him about the ridge, which I assume is what is shown as rib 56 in the patent drawing? A. I think that we—we had some discussion, I know we had a discussion before he had a final draft of it.

Q. You say before he had a final draft of it? A. The only thing I remember is that when it was written up, as written it didn't have any claims, as I remember, that spe-

cifically stated anything about sealing, and I told him that sealing, having something that could be sealed in a bottle and shipped, was the primary purpose of this thing, I mean that was the most important fact, and he said, well, he didn't want to put that into the claims, because they would make the claims more narrow, and as I remember, he pointed out some place in the text of it where there was some mention of [348] sealing.

Q. I see. So your point is that you emphasized to Mr. Hovey that the important thing about this invention was this matter of sealing? A. Well, it was one of the—you could have all the others, and if it doesn't seal, it still couldn't be shipped, and we wanted something that could be shipped.

Q. I see. And you say you recall emphasizing this in your discussions with him before the application was filed? A. Yes.

Q. Well now, you talk about getting a draft of the application. How did you get the draft? A. Oh, probably U. S. Mail.

Q. I see. Do you recall whether you got this draft after you talked with him about putting the ridge on top of the retainer? A. Yes.

Q. That was the first draft? A. I remember specifically seeing the drawing that is in the patent.

Q. That was the first draft of it that you had got, ready for signature? A. That was the first one ready for signature, I think. There had been maybe some pencil sketches or something before.

[349] Q. But in any event, your recollection is that the first draft that came to you more or less in finished form, with the oath attached and accompanied by the drawings, is the one you signed? A. I'm not too sure about that. Because of this discussion it may have been something that came back.

Q. Well now, tell me what you have in mind that might have occurred? A. Well, I told you about the discussion about sealing.

Q. Yes. Now, at the time that you had the—let's get this straight. At the time you had the discussion about

sealing you had not yet received this draft of the application, is that correct? A. Well, it seemed like there was a draft. That's what brought up the discussion.

Q. Oh, I see. You had gotten a draft— A. Yes.

Q. —of the application? A. Yes.

Q. Was that a final draft ready for signature, do you know? A. I don't know. I don't remember the exact date that that was.

Q. I see. But your recollection— A. It seems like that was at lunch one day, and then we got this other later on.

[350] Q. I see. Your recollection is that you got this draft and then it occurred to you that you had better emphasize to Mr. Hovey that this matter of sealing is important, and then as a result of that some changes were made? A. Well, changes at least in the drawings. I'm not sure whether he—he didn't have any final drawings, but he may have had pencil drawings.

Q. I see. A. Because he had been given some of the former parts to make the drawings from.

Q. But you do have a clear recollection of having emphasized to Mr. Hovey before this application was put in its final form that this matter of sealing was important? A. That is correct.

Q. Now, Mr. Scoggin, I am looking at the introductory part to your patent application. The first paragraph states, "This invention relates to improvements in structures for dispensing liquids wherein is provided a spray-type hand pump mounted within a container for the liquid through use of the closure cap of such container." Your counsel has been kind enough to hand you a copy of the patent. I'm sorry I overlooked doing that. Do you see the first paragraph to which I refer? A. Yes, sir.

[351] Q. Now, that says nothing about sealing, does it? A. No, sir.

Q. Then the next sentence, in the second paragraph, says nothing about sealing? A. Well, there is reference to insecticides. Of course, they are very difficult to seal. There would be no direct reference, no, sir.

Q. Well, it says nothing about sealing. As a matter of fact, it just refers to the Martin patent, doesn't it? A. Yes, sir.

Q. And that is not a sealed—that is not in any manner or means a sealed sprayer, is it? A. That is right.

Q. And then the following sentence that begins, "The pump includes a vertically reciprocable plunger," that again is just a further description of the Martin device, is it not? A. There is nothing in that paragraph.

Q. Now, the third paragraph, in which it tells about the difficulties which have been experienced by virtue of the inherent nature of such structure since accidental actuation of the plunger causes dispensing of the fluid and oftentimes the material is used in part by store employees prior to sale because of the ready accessibility of the pump itself—now, that says nothing [352] about sealing, does it? A. That is correct.

Q. Now, that is also puzzling to me in another respect, Mr. Scoggin, which you probably recognize. Isn't it a fact that none of those Martin pumps were ever shipped mounted in the bottle so that there was no possibility of the plunger being actuated accidentally in the course of shipment or, of course, by a store employee? A. Well, there were many other reasons why they couldn't be shipped.

Q. Oh, yes. But the fact is that they weren't shipped. A. It was a sprayer similar to that, is the way I read it.

Q. Yes. Well, in any event, due to the fact that they never were shipped in the bottle, mounted in the bottle, you wouldn't have the particular difficulty which happens to be mentioned in the third paragraph of this patent. You never would encounter— A. Well, they weren't in the bottle, they were on a collar on the bottle, that's the way they were mounted. That's what that refers to, is the old-type package, on the collar.

Q. Yes, exactly. Well, accidental actuation of a sprayer attached to the collar isn't going to dispense liquid, is it? A. No, sir.

[353] Q. Well then, this is really a misunderstanding here in this particular paragraph? A. It may be to you, but it isn't to me.

Q. Well, let's go into this a little bit. A. All right.

Q. It's about time I do learr something about it. Here we have—this is representative of the manner in which the Martin sprayer was used in the prior art (indicating). A. Yes.

Q. We have heard that earlier in the case. Is that right? A. Yes.

Q. It was shipped in this manner (indicating)? A. Yes, sir.

Q. And when it got into the store it was put in the shelf in this manner (indicating)? A. Yes.

Q. Very well. Now, visualize that on the shelf of the store, and visualize it having arrived there in the manner I have described, and let me read this pragraph to you: "Difficulties have been experienced in the field by virtue of the inherent nature of such structure since accidental actuation of the plunger causes dispensing of the fluid and oftentimes the material is used in part by store employees prior to sale because of the ready accessibility to the pump itself." Now, I can [354] understand the latter sentence, that the pump could be said to be readily accessible, the clerk could take the top off and put the pump in and then spray, but now with respect to the first sentence of that paragraph, what possibility is there of accidental actuation of the plunger? A. Well, that would be if it was shipped in the bottle.

Q. Yes, if it were shipped in the bottle? A. Yes.

Q. But we have just agreed, haven't we, that it was not shipped in the bottle? A. No, not at that time.

Q. Yes. Well, I think we have straightened that out. I don't think you need to be too concerned about a slight discrepancy like that, Mr. Scoggin. A. I'm not.

Q. Now, the fact is, however, that that paragraph says nothing about sealing? A. That is right.

Q. Then you go down and start on the objects of your invention, and it says, "The most important object of the present invention, therefore, to provide structure for rendering the pump inoperable during shipment and while in storage, as well as on the shelves of the retail dealer." Now, that says nothing about—that says nothing about sealing? A. No, sir.

[355] Q. Then you go on and say, "Another important object of the present invention is to provide structure capable of carrying out the functions as set forth above, which is also adapted to enclose the head of the plunger and thereby protect the same, as well as handlers of the merchandise by virtue of the fact that the said plunger is completely enclosed and held at the innermost end of its reciprocable path of travel." Now, that says nothing about— A. I think it does, quite a bit.

Q. I see. A. Something that is completely enclosed should be sealed.

Q. Should be sealed. A. And then to "protect same, as well as handlers." To me, being in the insecticide business, most people don't know that the U. S. Bureau of Agriculture approves all these insecticides so that you can drink them. Some people say safer than whiskey, but most people think they are poisonous to people and they don't wish to have it on their hands and so forth. That would be the handlers.

Q. Yes. A. If it leaked the only way you could protect the handlers would be to keep it from leaking. I don't believe the sprayer could bite them.

Q. I see. But I do want to remind you, Mr. Scoggin, that this [356] morning you told us that these things broke off and made sharp points sometimes and people were cut and so on. A. That is right.

Q. Now, if you had an overcap on there and that thing couldn't break off and so on, it couldn't represent a threat to a person as a possible way of cutting them. Now, I know in the morning you were referring to the dip tube. A. Yes.

Q. But I believe somebody else mentioned earlier that you had damage to sprayers during shipment. Now, when it says here that the enclosure of the head protects the handler, why doesn't it mean just as well that it protects them against being cut by the edges of a broken pump? A. Well, it probably could, but since I was so familiar with insecticides that wasn't what it meant to me.

Q. Yes, I see. So to the extent that that inference can be drawn which you have just drawn, you say that this paragraph mentions sealing? A. Yes.

Q. Which you agree with me, it doesn't mention it in such a manner that would give the ordinary reader the impression that sealing was the big feature of this invention? A. Well, the ordinary reader doesn't read patents.

Q. I see. Now, letting that one go, let's get down to the next object where it says, "The further object of the [357] instant invention is to provide a hold-down cap that may be quickly and easily applied and removed by virtue of a releasable attachment to a part of the entire unit such as by the use of a screw-threaded interengagement." Of course, that says nothing directly about sealing either, does it? A. No, sir.

Q. And that same is true of the next statement of object? A. Correct.

Q. It talks about using a part of the unit in order to hold down the closure cap. So there is really nothing said directly about sealing in the statement of objects of the invention, is there? A. Well, only the part that I have pointed out there.

Q. Yes, sir. Keeping in mind that you feel that that inference can be drawn from the one statement. A. I don't think.

Q. Now, if we turn over to the original claims—and by the way, Mr. Scoggin, there were 15 claims filed in the original case. I now hand you Plaintiff's Exhibit E, which is the file wrapper of your patent. Now, one might say that 15 claims is a good many claims to be devoted to a structure of this kind, yet as far as I can see, Mr. Scoggin, none of the 15 original claims made any reference whatever to sealing. [358] A. I think that is right.

Q. By the way, what did you mean, what did you have in mind when Mr. Schmidt asked you a question which involved the term "integrated sprayer"? A. Well, that is a sprayer that can become a part of the package and is so constructed that it can be shipped with the package, and it is a part of the sprayer and—I mean part of the package, part of a complete package, integrated into the package, an integral part of the package.

Q. I see. By the way, before you filed this patent application you looked at this prior art which Mr. Hovey had found, didn't you? A. I think I did.

Q. And you remember seeing there this Lohse patent? A. I don't remember it specifically, no.

Q. Yes. Well, a little later on we will put in the record the numbers of the patents which Mr.— A. What I mean, I don't remember it at the time there. We may have written a report on all the former patents. I'm not sure.

Q. Well, a little later on we will put into the record a list of the patents which were discovered by Mr. Hovey's office when they made that search, and it includes the Lohse patent, and I was wondering if you recollected it? [359] A. I think so. I remember it now, anyway.

Q. Also by agreement, at a later time, we will put in the record this sample of the Lohse sprayer with overcap, which was in use in the industry I believe prior to 1940. Have you seen this? A. Yes.

Q. Is that an integrated sprayer? A. I would say so, yes.

* * *

[360] Q. Mr. Scoggin, so far as you know at the moment this drawing which is apparently based on the drawing made on February 11, 1957, by the addition of a rib to the top of the retainer shown in the February, 1957, drawing was the first drawing of the device which includes the sealing ring of that kind for use with an overcap where the overcap may have a clearance at the bottom of the skirt. Now, do you know of any other drawings, sketches or descriptions of any kind which describe the structure as shown in your patent drawing that bears an earlier date than that? A. Well, if I remember, there are probably some sketches there. It seems like the 38 had ribs on it and at an earlier date.

Q. As I recall it, Mr. Scoggin, you are unable to give us a date as to when the sketch was made that is shown in your Deposition Exhibit 38? A. That is right, I am not sure when that was made, but that could have been a sketch made in connection with the tool maker. I am not sure whether it was the tool maker or somebody else.

Q. You say it could have been made prior to February 11, 1959? A. Yes, it could have been. I am not sure when it was made.

Q. The fact is, when Mr. Turner was making up the drawing of Plaintiff's Exhibit M, it was dated February 11, 1957, he [361] did not show there any rib on the collar although this apparently was intended to portray your latest thinking on that spray? A. We have no engineering department at Cook Chemical and Chet Turner has to be a man who is good at drafting, you can see from that, more or less almost freehand, and he took the parts. His assignment, as I remember, was to take the parts that we had and draw up a drawing so we could go to the tool maker.

Q. Wouldn't you say that the drawing made by him at this time would have incorporated all your latest and best thinking on the subject? A. Not necessarily. He probably took the parts and made that.

Q. Who specified the details of the structure which he would draw up? A. I think all of that was taken from actual parts that we had in this experimental matter.

Q. Do I understand the only way you feel that you can go back of this date of February 11, 1957, was an expected showing of some reduction of practice of the idea of the sealing rib on the retainer which would cooperate with some part of the overcap to form the seal and in this structure would also have clearance between the lower skirt of the overcap and the top of the container cap is by virtue of Plaintiff's Exhibit K, formerly your Deposition Exhibit [362] 38?

* * *

A. The first part of the question about the ribs, they are in there. So far as the other part, it is not here. We were earlier than that, I say when I was conducting all kinds of experiments. What had seemed to be a very simple thing when I started out, it turned out to have more complications than I had thought. We had tried everything. Probably at the time of this drawing we had a [363] cap. There is one in the exhibits here where we actually tried sealing on the cap and found that we couldn't.

Q. Found that you couldn't? A. We couldn't do it successfully.

Q. I see. Well, just in plain language, Mr. Scoggin, here is what I am after. We are trying to find out when you in effect invented what you show in the patent and so far as we can see from the papers we have in front of us, the first proof that you have, are these papers that are dated February 11, 1957. Now, what I want to know is if you know of any other documents or papers or sketches, or even products that embodied what is shown in the patent drawing and which are earlier than that date? A. Well, the first part of your question had to do with this exhibit.

Q. Yes. A. And that could be, yes, to the first part of it. The latter part of it, I don't know of any other drawing other than the patent drawing itself.

Q. Now, I just want to mention to you, Mr. Scoggin, in taking your deposition we asked you a few questions about that or your Deposition Exhibit No. 38, as follows—you were asked something about who prepared this drawing of February 8, 1957, Exhibit 37, which is that drawing you said was made by Mr. Turner, and you answered Mr. Turner [364] made that. Then you were asked:

"Q. And he is employed, I believe, by Bakan, or was at that time? A. He is—was and is—

Q. He still is. Who prepared this sketch, Exhibit 38, which is the question directed to you. You answered:

"A. I prepared that."

Q. Approximately on what date? A. Somewhere in between these—let's see, is there a date on that one—2-11.

Q. The next one in order is dated March 4. A. It was sometime between March 4 and February 11.

Q. That this sketch, Exhibit 38, was prepared? A. Yes.

Q. Do you recall that? A. I believe I do.

Mr. Schmidt: What page was that?

Mr. Conrad: I am very sorry, Mr. Schmidt. I was reading from the deposition of Mr. Scoggin taken on the 18th day of November, 1959, pages 171 and 172.

* * *

[365] Mr. Schmidt: If your Honor please, on Monday we interrupted reading the depositions in the evidence.

We had two more, one of Andrew M. Martin and another of E. G. "Pat" O'Reilly. I think we will not read them into evidence at this time and delay the trial.

The Court: I think that is a good idea. They will be in evidence and any matter in there, if you want to make a suggestion in the record, it is all right.

Mr. Schmidt: I think that is not necessary. I can cover that in my brief.

The Court: That will be fine.

Mr. Schmidt: So I have had the Martin deposition marked as Defendant's Exhibit 136, and the O'Reilly deposition as Defendant's Exhibit 138.

Now, I believe that all of the defendant's exhibits, both physical and documentary, have now been marked and identified by the reporter and dated and rather than go down one by one, I now offer in evidence each and every one of the defendant's exhibits.

The Court: Very well. Show all the exhibits that [366] have been marked on behalf of the defendant will be received in evidence.

Mr. Schmidt: And with that defendant rests.

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[380] PLAINTIFF'S CASE

Whereupon, the plaintiff, to sustain the issues in its behalf, offered testimony, oral and documentary, and made the following admissions, to wit:

(Plaintiff's Exhibits P, Q, R, S, T, U, V, W, X, Y, Z, AA, BB, and CC marked for identification.)

Mr. Conrad: Your Honor, during the course of Mr. Scoggin's testimony, he made reference to the [381] Bakan 1, Bakan 2, Bakan 2 modified, and Bakan 3 sprayers, and some of the other witnesses have, also, and I am now offering as Plaintiff's Exhibit P, an illustration of the structure of the Bakan 1 sprayer, as Plaintiff's Exhibit Q, an illustration of the Bakan 2 sprayer as first made, which has been referred to in the evidence as the Bakan 2, as Plaintiff's Exhibit R, a sketch of the Bakan 2 modified,

and as Plaintiff's Exhibit S, a sketch showing the Bakan 3 sprayer. Mr. Schmidt would like to state a qualification.

Mr. Schmidt: I have no objection other than the fact that we do not admit that these sketches necessarily truly represent the precise nature and details of the devices in question, and with that exception we have no objection to their going in.

The Court: Very well. All right, they will be admitted in evidence.

Mr. Conrad: Your Honor, I offer as Plaintiff's Exhibit T, a certified copy of United States Patent 2,119,884, granted June 7, 1938.

The Court: What is the name of that patent, Mr. Conrad?

Mr. Conrad: Lohse, (spelling) L-o-h-s-e. That is it.

The Court: Admitted in evidence.

Mr. Conrad: As Exhibit U, certified copy of [382] patent 2,586,687, granted February 19, 1952, to Russell Mellon.

Mr. Schmidt: No objection.

The Court: Admitted in evidence.

Mr. Conrad: As Plaintiff's Exhibit V, a certified copy of patent 2,861,839, granted November 25, 1958, to Russell Mellon.

Mr. Schmidt: No objection.

The Court: Admitted.

Mr. Conrad: As Plaintiff's Exhibit W, a certified copy of patent 1,714,874, granted May 28, 1929, to John M. Hothersall.

Mr. Schmidt: No objection.

Mr. Conrad: As Plaintiff's Exhibit X, a copy of British patent 737,210 dated April 2, 1954, to Universal Metal Products, Limited, et al.

Mr. Schmidt: No objection.

The Court: It will be admitted without objection.

Mr. Conrad: As Plaintiff's Exhibit Y, certified copy of United States Patent 2,434,875, granted January 20, 1948, to Frederick M. Turnbull, et al.

Mr. Schmidt: No objection.

The Court: Admitted.

Mr. Conrad: Your Honor, I offer in evidence as [383] Plaintiff's Exhibit Z a physical model of the so-called Lohse sprayer, with overcap.

The Court: Admitted in evidence.

Mr. Conrad: It has been stipulated, your Honor, that this was in use in this country prior to 1940. Is that satisfactory?

Mr. Schmidt: Yes, that's fine.

Mr. Conrad: I now offer as Plaintiff's Exhibit AA, a closure consisting of two pieces threaded together, bearing a tag marked "Baker Cap". It is stipulated that this device was in use in this country prior to 1955.

Mr. Schmidt: No objection.

The Court: Admitted.

Mr. Conrad: I offer as Plaintiff's Exhibit BB, a section model of the cap offered earlier as AA.

Mr. Schmidt: No objection.

Mr. Conrad: Your Honor, I offer as Plaintiff's Exhibit CC, which consists of three sheets of writing and one sheet of drawing and which sets out interrogatories 8 and 9 directed by the plaintiff to the defendant, and defendant's answer to those interrogatories, and as the fourth sheet the drawing referred to in the interrogatories, subject, of course, to the defendant's right to introduce the remaining interrogatories and answers.

Mr. Schmidt: No objections.

[384] The Court: Admitted.

(Plaintiff's Exhibits P, Q, R, S, T, U, V, W, X, Y, Z, AA, BB, and CC received in evidence.)

Mr. Conrad: Mr. Turner, please.

CHESTER M. TURNER,

being produced, sworn and examined as a witness on behalf of the plaintiff, testified as follows:

Direct Examination by Mr. Conrad.

Q. Please state your name, Mr. Turner. A. Chester M. Turner.

Q. Where are you employed? A. For Cook Chemical Company.

The Court: Cook?

The Witness: Cook, yes, sir.

Q. (By Mr. Conrad) How long have you been employed there? A. Between 13 and 14 years.

Q. I see. What is your job? A. My job is plant manager of a production plant.

Q. What is it that is produced by Cook which you oversee? A. Which I oversee is sprayers.

Q. I see. And how long have you had that particular job? A. I'm not sure. It has been probably—approximately four years.

Q. I see. Now, what was your work as of, say, February of 1957? [385] A. I would say that was probably my job at that time.

Q. Were you, at that time, working under Mr. Scoggin in connection with the preparation to manufacture overcap sprayers? A. Yes. I think I was. I'm not sure about that date.

Q. Let me show you Plaintiff's Exhibit L and also Plaintiff's Exhibit M and ask you to look at them. Do you recognize those papers, Mr. Turner? I don't mean to interrupt your reading of them, but I wonder if you recognize them, first of all? A. Well, the drawing is vaguely familiar. I can't quite place the letter.

Q. The letter is apparently a memorandum written by you to Mr. Scoggin and Mr. Rhodes concerning some changes that are to be made in that drawing which you have in your hand, is that correct? A. That's what it looks like, yes, sir.

Q. Now, do you remember—

The Court: Will you talk just a little bit louder, please, Mr. Turner, so these gentlemen can hear you? It is awfully hard to hear back there if you don't speak right out. I can hear you but they can't; they don't know what you're talking about.

Q. (By Mr. Conrad) Is this memorandum, Mr. Turner, a memorandum of a meeting that had occurred

earlier? [386] A. It is hard for me to say. It looks like it probably is.

Q. Now, you will notice that on the first page, under paragraph B, Arabic numeral 2, it says, "Consider placing a ridge on top of collar to act as seal between collar and cover cap." Do you see that? A. Yes, sir.

Q. Do you have any recollection of why that recommendation was made by you, at least mentioned by you in your memorandum? A. No, sir, I can't remember too much that far back.

Q. You don't remember—do you remember that—or what were you doing in connection with Mr. Scoggin at that time in an effort to work up a commercial sprayer? A. Well, I was probably assisting him in that I would be in charge of the production of this model and to work it out where anything that came up could be produced.

Q. I see. Now, at this time you were actually manufacturing the so-called Bakan 1 sprayer? A. I think that is right, yes, sir.

Q. Do you know what I mean by the Bakan 1 sprayer? A. Yes.

Q. You were manufacturing that, that sprayer, at the time this memorandum was written, is that correct? A. I'm sure we were, yes, sir.

Q. Now, do you recall that at some later date you eventually [387] arrived at what you regard as a satisfactory design for a sprayer with an overcap? A. Yes, sir.

Q. Now, do you remember any of the events which occurred between the date of this memorandum and the time when you arrived at this satisfactory design for a sprayer with an overcap? A. Well, very little, except I think there were samples made and tested and it went on from there. I don't know the exact dates.

Q. I see. You have, I assume, a fair understanding of how these sprayers work, particularly the Bakan 1? A. Yes, sir, I would say so.

Q. Now, were you also plant manager during the time when Bakan 2 was being produced? A. Yes, sir.

Q. Now, what were the procedures followed in uniting the retainer to the barrel extension when you first started to make the Bakan 2 sprayer? A. The barrel to the collar, you say?

Q. Yes, sir. A. There was a solvent application made and more or less welded together with a solvent application.

Q. A solvent? A. Yes, sir, a solvent application.

[388] Q. Oh, a solvent application. A. Which would weld the two pieces together.

Q. Then what was done with it after this solvent application was made? A. Well, then it would be complete other than the addition of the protective cap.

Q. Well, to which piece was the solvent applied? A. To the barrel, I believe you referred to it.

Q. The solvent was applied to the exterior surface of this barrel extension where it comes up through the collar? A. Yes, sir.

Q. And then, as I understand you, the so-called collar was put down or telescoped over the outside of that barrel extension? A. Yes, sir.

Q. Now, was this solvent allowed to set up and harden before you did anything else with it? A. Well, there was —I wouldn't say it was allowed to set up and harden. There was a time lag between when that was done and anything else that was done to the sprayer.

Q. In other words, that would be a good, firm bond by the time you got around to say putting the cap on? A. I would say so.

Q. Now, are you familiar with—do you have any familiarity at all with the strength of the bond you get by this [389] uniting with solvent such as you have described? A. Well, yes, I would say it was very strong.

Q. Very strong. Well, suppose I wanted to try to—after this had set up the way you describe—suppose I wanted to try to screw down this collar so that the bottom of the collar would touch down here (indicating)—see what I mean—then, if I screwed it further, then you see that might pull this retainer off or collar off, if it weren't united firmly. You see what I mean? A. Yes, sir.

Q. You think I could do that by screwing down the cap? A. In most cases, no.

Q. What do you mean in most cases? A. Well, if there was a proper application of solvent.

Q. In other words, if you did your job right, then that could not be done? A. I wouldn't think so.

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[399] RALPH G. MARTIN,

recalled as a witness on behalf of the plaintiff, testified as follows:

Direct Examination by Mr. Conrad.

Q. You are the same Mr. Martin who testified earlier? [400] A. Yes, that is right.

Q. This is just for the purpose of the record, Mr. Martin; I have no doubt about it myself. Mr. Martin, you are familiar with the Wilco Company who I believe manufactured this product identified as Plaintiff's Exhibit B? A. Yes, sir.

Q. Now, if I understood from what was said that you sell them the sprayer? A. That is true.

Q. Do you have any business relations with the Wilco Company other than that of supplier and customer of dispensers? A. We are both a customer of Wilco and they are a customer of ours.

Q. In what respect are you a customer? A. We buy that starch from them.

Q. Do you have some arrangement with them whereby you distribute their product? A. That is right.

Q. Is there any kind of license agreement? A. Yes, there is a written arrangement with them.

Q. I see. And how old is that agreement? A. I don't think it is a year old yet.

Q. And do you recall how long ago you started negotiating? A. No. We talked about them distributing west of the Rocky Mountains, generally in the western eight states, and they [401] were very successful in California, and they wanted representation east of the Rocky Moun-

tains and we didn't know whether to get into it or not. We had some other things to do.

Q. You say the agreement is about a year old so you say you perhaps started negotiating as far back as sixteen months ago? A. Well, it took us a long time to make up our mind. The actual negotiation didn't take very long.

Q. I see, but a month or more? A. Yes, sir.

Q. What kind of stores represent the best outlet? A. Grocery stores.

Q. You mean by that super markets and grocery stores? A. Yes.

Q. Do you have any idea how many large super markets there are in the country? A. No, I don't. I have seen the figures but I don't remember.

Q. Over 10,000? A. Oh, yes, I would say so.

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[402] ROBERT WISE,

recalled as a witness on behalf of the plaintiff, testified as follows:

Direct Examination by Mr. Conrad.

Q. You are the same Mr. Wise who testified earlier in these proceedings? A. Yes, I am.

Q. Mr. Wise, I have the impression from the defendant's pretrial brief and also the opening statement and some of the evidence we have here that the defendant believes that Calmar is taking advantage of it by copying its overcap. You have already testified that the SS-40 was not developed by copying from the defendant and need not say anything more about that, but what other comment do you have, if any, on this charge of copying that has been made by the defendant with respect to these products? A. Well, I realize that Cook Chemical seems aggrieved, but Calmar also feels that they have been victimized somewhat by the events that have taken place, which has previously [403] been placed in testimony, but the first Bakan 1 sprayer was a copy of the Calmar sprayer down to the critical dimensions, but beyond that we introduced

our SS-40 sprayer commercially in January of 1959; I believe it was December of '59, if I remember the testimony correctly, that Bakan introduced their so-called Model 2 or modified Model 2 sprayer with overcap and they copied some of the Calmar features at that time, in our opinion. I wonder if I might have the modified 2 sprayer and SS-40 sprayer? I have the Model 2 of—

Q. I now hand you Plaintiff's Exhibits P, Q and S, which show the Bakan 2 and Bakan 2 modified and also Bakan 3. You also have before you this matter that we have been referring to as the model of the SS-40. Is that sufficient for your purposes? A. Yes. The first overcap on the original Model 2 Bakan sprayer was this cap (indicating), and it was made of regular polyethylene.

Q. That is which exhibit number that you just held up? A. This is Defendant's Exhibit No. 30. They subsequently changed that, according to this testimony, to a modified Model 2 overcap which has no exhibit number, but I am confident that this represents the sample of it, in certain respects this copying of our SS-40 overcap. Mr. Scoggin may have been misinformed. He said that they [404] wanted to use linear polyethylene such as we had done in our SS-40 overcap instead of regular polyethylene.

Q. That was brought out in the Bakan 2. A. He was under the impression that it was not available commercially at the time they modified the Model 2. I believe it can be substantiated that linear polyethylene was available in 1955, commercially. Beyond that the original Model 2 overcap as exemplified in this board did not have hanging from the inside a cylindrical seal-in ring which the SS-40 as shown on that board did have. When they modified the Model 2 they placed inside hanging downwardly a sealing ring which, in the opinion of our people, tended to move the location of this seal closer to that of the SS-40 seal. Furthermore, once again the size was appropriated in that this cap can be placed on the threads of the SS-40 sprayer and this can be accommodated, which the first one could not do. This sprayer here (indicating), the original Bakan Model 2 overcap sprayer, the collar had two separate threads inside the overcap with two leads for the threads to start, but on the SS-40, we had one

continuous thread around the circumference of the collar which our engineers described as a buttress thread. This was copied in the Model 2 sprayer, the modified Model 2 sprayer.

Q. Of Bakan? [405] A. Yes, sir. They went through several changes. We noticed they kept changing the depth and height of the cap. I happen to see a picture here which is Defendant's Exhibit No. 82, and I believe that this represents the change on their collar configuration and the change on the sealing ring and I think there was what we called the short ring. They made it longer there, somewhat approximating the length of our sealing ring now. That all happened in relation to No. 2 and it occurred in 1959.

We must remember that the SS-40 was introduced in January of 1959. We have never changed the product in over three years. Along in 1960, Bakan once again made a change in bringing out their Model 3 with the inner seal in which the overcap was used to place in position a series of inner seals to contain liquids inside of the container and once again we felt that this had tended to copy us. Now, frankly, we believe that all of these changes have been beneficial to the business of the Cook Chemical Company because it is our belief that their commercial success is somewhat related to the changes that they kept making in the sprayer with overcaps. Following our lead and as they made these changes, they enjoyed greater success in the market and Bakan being a division of Cook Chemical, even Cook has recognized the advantages of the Model 3 because, to the [406] best of my knowledge, all of the Real-Kill insecticide on the market today has the Model 3 sprayer on, even the bottle which Mr. Austin testified about the other day also has the Model 3 sprayer. We believe it would be of great advantage and we believe Cook believes it to be of great advantage.

[407] Q. Now, this is their device with the inner seal like your SS-40 had some long time before? A. That's right.

Q. Now, in connection with the advertising of the Bakan products have you noticed anything significant with respect to whether or not the Bakan 3, which you

say closely approximates your SS-40, is a better leakproof sprayer than say the Bakan 2 was, which consisted of the —which comprised a seal only between the collar and the overcap? A. We have noticed some unique changes, in our opinion. Our sales force pick up copies of Bakan literature periodically and send it in to the home office, and when they introduced the original Bakan Model 2 with overcap they sent out some literature, of which this is a Thermofax copy.

Q. May I have that a moment? I would like to mark that as Plaintiff's Exhibit DD.

(Plaintiff's Exhibit DD marked for identification.)

Q. I now return it to you. A. The title of this literature is "Bakan Model 2 Leakproof Sprayer" at the very top. And to us that is the very most significant thing about it. On the other side they have typed in here "Introducing the Bakan [408] Model 2 Leakproof Sprayer," and in the paragraph describing the protective cap they mention the fact that it is a leakproof item. However, after they changed the original model 2 and brought out the so-called modified model 2, they then changed the literature and no longer featured the word "leakproof" in describing the product. In the title of this they say "Model 2 Sprayer with protective cover cap."

Q. Now, may I have that piece of literature you are holding so I may mark it as Plaintiff's Exhibit EE? Thank you.

(Plaintiff's Exhibit EE marked for identification.)

A. Now, in this particular literature, nowhere do they mention the word "leakproof" except in this one paragraph, which was lifted almost verbatim from the small paragraph on this sheet (indicating).

Q. That is DD? A. Yes. That is DD, and this is EE. When the model 3 was introduced they brought out some new literature which said, "Model 3 Triple Seal Leakproof Sprayer. Exclusive triple seal for leakproof performance." On this side, "Model 3 Bakan Sprayer, triple seal, leakproof." So whereas originally they had described in their advertising literature the original Bakan 2 as being leakproof, they have now put the emphasis on [409] protective cover cap and have put on the Model

3 the leakproof emphasis. Now, we feel that this is somewhat important, and we feel that the Bakan Model 2 will tend to fade away, because the salesman going out selling the Model 2, he goes in to a customer and he says, "Here is a sprayer with a cap and it has only one seal, and here is a sprayer that provides more than one seal and gives you greater protection in the Model 3, and I believe any customer would prefer this unit, such as Mr. Austin has, particularly when there is no difference in their published prices that are on these pieces of literature."

Q. Now, Mr. Wise, I— A. Now—

Q. Excuse me. Continue if you have more there. A. There is one step further. I might mention, we have tried to determine when these particular pieces of literature were printed. We found a code number which ends 460 in each case. We assume maybe that was April, 1960. And the next piece of literature that we were able to obtain was this large piece of literature here, which is coded on the back 961, which we assume was September, 1961. And this apparently outlined almost all the products they make except the Bakan 2. It is no longer shown on this literature that is distributed. [410] They were featuring exclusively the Model 3 triple seal leakproof sprayer. They still retained the original Model 1 sprayer.

Q. And as I understand from what you said earlier, the only two products which they apparently still are advertising are the two that they derived, you might say, under your leadership? A. Beg pardon? I'm sorry. I didn't get that, Mr. Conrad.

Mr. Conrad: Will you please read it?

(Question read.)

A. I would say "yes," Mr. Conrad. The only literature that we have seen recently has been this piece (indicating).

Q. Now, may I mark that Plaintiff's Exhibit FF?

(Plaintiff's Exhibit FF marked for identification.)

Q. And I am now marking as GG the single page, printed on both sides, and what is apparently the front page bears the title "Bakan Plastic Sprayers and Dispensers Model 3 Triple Seal Leakproof Sprayer."

(Plaintiff's Exhibit GG marked for identification.)

Q. Mr. Wise, I got the impression from testimony which Mr. Martin gave during the defendant's case that when the Bakan sprayer with the overcap was introduced for [411] the year 1955 that it virtually, or at least—it virtually swept from the market the standard sprayer which was attached to the bottle by a paper yoke. What comment do you have on that matter? A. Mr. Conrad, before answering the question, did you say '55?

Q. '58. A. In 1958 Bakan introduced—or at least that was the first full year of their production—their original Bakan 2 sprayer with the overcap, and I realize that they obviously feel very strongly about it. However, in looking back on the history of the last three years, since we have been in production, or the last four years, we, too, have sold millions and millions of shipper sprayers described as SS-40, and they have sold millions of their sprayers with overcaps, but the fact remains that in the last three years we have sold many more millions of the old-fashioned, regular type sprayer that has no seals whatsoever and has been described here as hanging on the side of the bottle. In our case we have sold more of those in the past three years than we have of the SS-40, and we consider our SS-40 sales to have been very satisfactory. There are many customers today who still hang the sprayer on the side of a bottle or put it in a carton, not only in the case of sprayers [412] but in dispensers, which is part of our industry.

Q. Did you just recently make some effort to, you might say, get a representative collection of the products which are being marketed today with a sprayer hung on the side? A. Well, I won't say that the effort we made was representative. We—I think I brought one package with me, and we picked up another one here locally Saturday, and on Monday afternoon we asked our sales force, three people, to pick up some packages and send them in, and they have been sent in.

Q. Are these the packages which are in this box over here to my right? A. Yes.

* * *

[413] Q. (By Mr. Conrad) Now, I have set out just a few of these we have been talking about in the box here,

Mr. Wise. Will you tell us what your purpose was in collecting these? [414] A. Well, the purpose in showing the—I don't believe you got them all, did you, Mr. Conrad?

Q. That is correct. A. The purpose in showing these is to illustrate that the marketing of products with sprayers is such today that the use of sprayers with overcap has not swept out of the market all of the old-fashioned, non-sealing sprayers that have been hung on the side or placed in cartons. We certainly are selling many more today than we are of our shipper-type sprayers.

The Court: Is there any particular reason for that? Is it the price element, or what do you attribute it to?

The Witness: Well, sir, part of it may be price. The product is a little bit less expensive, but that isn't the only answer in this case. I believe Mr. Scoggin testified that the extra expense involved in handling these regular type sprayers was such that he finally was able to bring out his sprayer with an overcap and put it on the bottle at about the same price. Different people prefer to market different products in different ways. We have found that many advertising and promotion men have completely different feelings about how a package should look or what should be incorporated in the package.

[415] Mr. Conrad: Your Honor, I will have these fifteen items marked as Plaintiff's Exhibits HH-1 through HH-15.

The Court: Very well.

(Plaintiff's Exhibits HH-1 through HH-15, both inclusive, marked for identification.)

A. Is it all right to mention that there is a Bakan sprayer there hanging on the side of one of these packages?

Q. Certainly, if that is the fact. Which one is it? A. It is in a little carton attached to the clear bottle of starch, which is right in front of you, in the red carton, and the one next to it is a bottle of window cleaner, which is also a Bakan sprayer.

Q. Is this the first Bakan product you mentioned? A. No, that is a modified model 2 sprayer without an overcap. If you will look at the collar—

Q. It is a Bakan sprayer that is on there? A. It is a Bakan sprayer.

Q. I am now holding up the product which is called Wind-O-Kleen and I will mark that HH-1. Is there another one there? A. I believe the one next to it, to the right of it—no, there—I believe that is also a Bakan sprayer.

Q. This Sta Nu Magic? A. I believe that is correct.

[416] Q. I will mark that as HH-2. By the way, did the Court ask you a question a little earlier about price? How does the price of your SS-40 compare with the price of your S-25-LP? A. The price will vary from—don't hold me to this exactly—but I would say it is in the neighborhood of 15 to 20 per cent higher in price.

Q. Which is higher in price? A. The SS-40 inner seal sprayer with overcap is higher than the regular type sprayer by 15 to 20 per cent.

Q. Yes, that's the regular type sprayer, but how does the price of the SS-40 compare with the price of the S-25-LP? A. Well, the S-25-LP sprayer, which was shown here in Defendant's Exhibit Number 26, is in turn about approximately 10 to 15 per cent higher than the SS-40 with overcap.

Q. I see. A. But you must remember, this sprayer had considerably more parts to it.

Q. By "this" you mean the S-25-LP? A. Yes.

* * *

[417] The Court: That could well account for the difference—to bargain hunters, those who want to get the same quality for less money, will take the same thing for less price. If it is hanging on the side, it doesn't cost as much.

The Witness: Yes, I think you're quite right, your Honor, in relation to the customers that we have. We sell to industry. Calmar does not sell to the consumer.

The Court: Well, I am speaking of the housewife who may go in and be thrift minded or budget minded, she will go in and look for a difference of five cents or so.

The Witness: If I may be permitted, I will tell you an interesting story in that regard. It has been surprising

to me that there has been so much objection and testimony stressed here about the fact that a sprayer hangs on the side of a bottle and the housewife doesn't want to buy it, because she gets the sprayer free, but actually our largest customer, which is our parent company, who make Windex, they sell Windex sprayers in this manner. They take a regular sprayer and put it in a carton, and that carton is sold on the shelf of the super market for 15 cents. So here's a case where the housewife actually goes in the store and [418] purchases a regular sprayer and pays money for it. With the sprayers that are all attached to the bottle, they are all part of the integral package, and the ones that are hung on the side of the bottle, they are all free. And if you will notice most of these collars, they all say "free sprayer" or "free sprayer enclosed."

The Court: Is there a considerable amount of this product, these bug killers and insecticide killers, anything with which these sprayers are used, does it come in containers without sprayers?

The Witness: Yes, there are sales without sprayers. I'm not familiar with the volume. I believe that the volume with sprayers is considerably higher than that without sprayers. But I have had the feeling that perhaps the use of insecticides with sprayers may have been overstressed somewhat. On the S-25-LP, shown here in Defendant's Exhibit Number 26, we sold several million of these, but only about half of them went for use with insecticides. I don't have the breakdown on the SS-40, but I think about half of them would have been for insecticides, certainly considerably less than that this year.

Q. (By Mr. Conrad) You have made reference to your sprayer, the S-25-LP. [419] A. Correct.

Q. Does this product which I am holding in my hand, which I have taken from among those in Plaintiff's Exhibit HH, represent a current use of your S-25-LP? A. Yes, it does.

Q. I will mark that one HH-3. A. That product is hair spray. It has been on the market for several years. The customer likes the appearance of that package, and in that case is willing to pay more money for the S-25-LP than he is for the SS-40, and he is very happy with that

product, particularly after we corrected all of our difficulties in manufacturing we had a few years back.

* * *

Cross-Examination by Mr. Schmidt.

Q. Mr. Wise, let's approach this matter in reverse order and talk first about this display of Plaintiff's Exhibit HH-1 to 15. Over how long a period of time did you make this collection? A. I can pick out the ones that we obtained—the one with the S-25-LP I received last week. Would you care to remove that one. May I come down and examine them?

Q. Yes, if you will, please. A. I can't say for this particular package (indicating). We have another one in our hotel suite that is identical to [420] this that was purchased here on Saturday.

Q. Speaking of the starch package? A. Yes, speaking of the Dumas Milner starch package. And I believe that all the rest of these were obtained by our sales force when we asked them to do so last Monday at noon, and they have all been sent in since that time.

Q. Do you know whether or not your sales force obtained these from the shelves on the open market since last Monday? A. So far as I know, I have not examined them. There are some receipts attached to some of these packages which should show a purchase date.

Q. For the most part, you do not know whether or not this collection has come from your laboratory and has been a constant collection over a number of years? A. No, it has not.

Q. You are certain of that? A. If you would like to go to Cincinnati, I have quite a collection that is untouched.

Q. Do you have any way of knowing how long each of these products had been on the shelf before you picked them up? A. I have no way of knowing.

Q. Now, among all of these products, how many relate to household insecticide? A. How many? Well, four, as I see it.

Q. Four out of 15 have to do with household insecticide. Now, [421] how many of those four have the sprayer hanging on the side? A. There would be one, two, three—it's hanging on the side in the case of three, and it is in the carton in the case of one.

Q. Now, do you have any way of knowing what per cent of the manufacturers of household insecticides that represents? A. No, I don't. I have no way of knowing.

Q. Do you have any way of knowing what per cent of sales those three products with the sprayers hanging on the side represent? A. No, I haven't.

Q. Now, you have testified, I believe, that in your opinion Cook Chemical Company has, for one thing, copied your threads in their Bakan 2, is that correct? A. I don't remember the exact wording, but it seems to me they copied it or at least copied the idea. The actual description of a so-called buttress thread came from our chief engineer.

Q. Is there anything in the threads as such that you consider to be a proprietary item? A. I don't feel qualified to answer it. I will if you want me to. I don't know.

Q. Do you know whether or not a new and different type of [422] thread was adopted by, let us say, Mr. Corsette in your SS-40? A. I don't know.

Q. So you do not know whether or not the thread was copied from the SS-40 or copied from something that might have well been in public domain and well known? A. I don't know. I do know that this, the Bakan 2 overcap, will screw down over the thread on the SS-40 collar.

Q. But are threads, as such, so far as you know, new? A. I don't believe they are particularly new. I think that buttress threads have been around for a good many years, but the particular configuration or angle of it might be important. I don't know.

Q. Now, you spoke of the change that was made by Cook in the Bakan 2 in so far as the cap, the collar seal is concerned? A. Yes.

Q. Is there anything, so far as you know, in the SS-40 and relating to the particular way in which it seals that is a proprietary item of Calmar? Do you know of any patent protection, for example, that has been obtained by

Calmar on that type of sealing? A. I can't say, Mr. Schmidt, because I am not familiar with the patent on the—the details of the patent on the SS-40.

[423] Q. So from an alleged copying standpoint you do not know whether or not Bakan adopted anything of Calmar, in so far as the cap-to-collar seal is concerned, that is considered to be your proprietary item? A. Technically speaking, I do not know.

[424] Q. Have you had any way of knowing from your own knowledge as to what was in the mind of Cook Chemical when they came out with the Bakan 2, as to whether or not they had in mind copying Calmar in any way? A. I don't believe I am qualified to testify to Cook, as to what they had in mind.

Q. You can't? A. I recall Baxter Scoggin testifying as to the development of the Model 2 and the triple seal went along almost concurrently because of pressure from the sales department.

Q. You do not recall Mr. Scoggin ever indicated that he was intending to or did in any manner copy Calmar, do you? A. I don't recall that Baxter said that, no.

Q. In any event, you have indicated, have you not, that in developing the SS-40, you had the Bakan 2 before you and knew about it? A. Correct.

Q. Not that you copied it. I think you said, did you not, yesterday that as far as simulation of the appearance is concerned perhaps you had that in mind? A. I don't think that is a good description and, Mr. Schmidt, we talked about similar appearance out in California, and in my deposition I believe I gave a little description of similar appearance in which I said that many people liked the idea of the appearance of compact automobiles [425] but that the Falcon and the Corvair were two different types, each of entirely different description. I think that my bride was one of those who liked the appearance of this. I didn't think there was any significance to appearance in this.

Q. I have but one more question. Are you in this line of testimony where you are charging Bakan with having copied Calmar, are you saying that if there is such copying, and if that is true, that that justifies anything Calmar

may have done insofar as duplication or simulation as Bakan is concerned? A. The question confuses me a little bit. I won't admit that Calmar had duplicated the Bakan development. I believe in our deposition in California we stated that we gave very specific instructions to our engineers not to copy the Bakan unit. We wanted something better. We only proceeded in a commercial scale upon the advice of our patent counsel.

Q. I believe I heard you testify something to the effect of an integral package with the sprayer hanging on the side. Do you consider that to be an integral package? A. That was an unfortunate expression. I guess I had been picking it up listening to this trial as it had developed.

Q. You do not consider the sprayer hanging on the side of the bottle to be an integrated assembly in the sense of the [426] SS-40, do you? A. Oh, you might call it integrated assembly but if I went out to sell it, I wouldn't say, "Let's make this package integrated".

Q. You are speaking of which package? A. A container and a sprayer.

Q. Hanging on the side of the bottle, you would not call that integrated either, would you? A. I think I would use some other description.

Q. You have testified with respect to the large number of sales that are still being made concerning sprayers having your overcap? A. Yes.

Q. Are those sales primarily in connection with the container, that is, hanging on the side of the container? A. I couldn't say that they are primarily. These sales go to almost hundreds and hundreds and hundreds of customers.

Q. As a matter of fact— A. (Interrupting) And I am not familiar with them.

Q. For the most part are they not sold separately from the container, the sprayer may be purchased separately? A. It all depends on your interpretation of the most. Of the sales of original sprayers, Mr. Schmidt, that we sell others, the sales of triple sprayers, somewhere [427] between 40 and 45 percent are sold, to the best of my knowledge, in what you might say loose condition; in other words, they are not in a separate container. The balance

are sold primarily to the Drackett Company, which is our parent company who do put them in a container and do sell them, but that 40 or 50 percent represents a big quantity of sprayers.

Q. Do you handle the sprayer on the side of Windex? A. No.

Q. Do you sell it with the package? A. Normally the sprayer is sold separately. I do think—I can't state positively—I think periodically they have a promotion where they are sold together.

Q. Is that the purchase by the Drackett Company for sales in connection with Windex, does that not represent a large percentage of your sale of conventional sprayers? A. Well, I believe I explained that 40 to 45 percent were other than this.

Q. Then 55 percent goes to Drackett? A. Fifty to 55 percent, I would say. I don't have the exact figures.

The Court: Gentlemen, I wonder if we can't agree that both the accused and the patented were accepted for commercial use?

Mr. Schmidt: We can't help but so agree.

[428] The Court: There is no question of that, is there? Isn't it a fact we can agree that both the patented device and accused device were ready and had an extensive commercial acceptance?

Mr. Conrad: I think—

The Court: All right, if you cannot admit it, there is no use to argue about it.

Mr. Conrad: We are not considering as being in testimony—

The Court: All right. When we get into the millions and fifteen hundred millions, I think you are doing pretty well, gentlemen, whatever the figures on the other side may be. Pardon me?

* * *

[431] JOSEPH McCORMACK,

being produced, sworn and examined as a witness on behalf of the plaintiff, testified as follows:

Direct Examination by Mr. Headley.

Q. Will you state your name to the Court, please? A. Joseph McCormack.

Q. Mr. McCormack, where do you live? A. Deer Park, New York.

[432] Q. For whom do you work? A. Colgate-Palmolive.

Q. What is your position or your job with Colgate? A. Assistant to the budget manager of the Household Products Division.

Q. How long have you held that particular job? A. One month.

Q. Prior to that what was your employment? A. Assistant to the general accounting manager of Household Products Division.

Q. Assistant to the general accounting manager of the Household Production Division? A. Yes, sir.

Q. Of Colgate? A. Yes.

Q. How long did you hold that position? A. From 1957, through January 31st.

Q. Would you briefly tell the Court just what that job as assistant to the manager of general accounting of the Household Products Division entailed? A. It entailed the supervision of the preparation of all financial data pertaining to the Household Products Division.

Q. Now, Mr. McCormack, have you at our request obtained from and brought with you Colgate's sales information for the [433] year 1958, with respect to all the bottled insecticides marketed by Colgate in that year? A. Yes, I have.

Q. And would you state to the Court what size bottles Colgate marketed that year? A. Sixteen ounce and 32 ounce.

Q. And under what trade name were those bottles sold? A. Kan-Kil.

Q. Mr. McCormack, would you tell the Court what the relationship of the sprayers were to that bottle, how they were attached? A. It was attached to a collar card to the bottle.

Q. I will show you, Mr. McCormack, Defendant's Exhibit No. 18, and ask you if that portrays what you have just described verbally? A. Yes, sir.

Q. With the sprayer attached to the neck of the bottle by means of a collar card? A. Yes.

Q. Was that the only way that Colgate marketed a bottle of insecticide which in any way involved the pump in the year 1958? A. Yes.

Q. Now, Mr. McCormack, with respect to the 16-ounce bottle, which incidentally is the size represented by Defendant's [434] Exhibit No. 18, would you tell us what the total number of bottles marketed in the year of 1958 of that size was? A. 79,796 dozen.

Q. And when you say "dozen", is that the same as cases? A. Yes.

Q. These bottles came 12 bottles to a case? A. Yes.

Q. Now, with respect to the 32-ounce bottle, which was the other size marketed by Colgate in 1958, how many dozen or cases were marketed in that year? A. 32,476 dozen or cases.

Q. Now, with respect to the price that was obtained by Colgate from all of its customers in that year concerning these two sizes of bottled insecticide, would you just tell us what those prices were? A. Well, for the 16-ounce bottle, it is carload, $5.63; 50 cases, $5.68; 10 cases, $5.80; five cases, $5.85.

Q. When you mention that you are referring to in what lot the order may be, if it is a five-case order or less it would be $5.85 a case? A. That is correct.

Q. And you go on up to the price per carload lots? A. Yes.

Q. Now, with respect to the 32-ounce bottles, tell us the price, the 1958 price, Colgate's price. [435] A. For carload, $9.70; 50 case, $9.80; 10 case, $10.00; five cases, $10.05.

Q. Now, Mr. McCormack, this information that you have given us, was that sales information obtained by you from the Colgate records where they are regularly and ordinarily kept in the regular course of business by Colgate within the department in which you work? A. Yes.

Mr. Headley: Will you mark this as Plaintiff's Exhibit II?

(Plaintiff's Exhibit II marked for identification.)

Q. Mr. McCormack, I will hand you what has been marked Plaintiff's Exhibit II, and ask you if that does not summarize the information that you have just testified about concerning the number of cases of the different size insecticide bottles that Colgate marketed in the year 1958, and the prices Colgate received for those bottles? A. Yes, it does.

Mr. Headley: At this time the plaintiff offers in evidence Exhibit II.

Mr. Schmidt: No objection.

The Court: Admitted without objection.

(Plaintiff's Exhibit II received in evidence.)

[436] Q. Now, Mr. McCormack, it has been in evidence here earlier in this case that in 1958 Colgate flooded the market with millions of dollars worth of bottled insecticide, and I ask you whether you have taken these prices for 1958 and the total quantity of bottled insecticide which was shipped by Colgate, and using the prices, the maximum price, which would be the price for five or less, disregarding the lesser price concerning car load lots, but using that maximum price, have you figured what the total dollar value— A. Yes.

Q. —to Colgate of such insecticide marketed in 1958? A. Yes, I have.

Q. And would you tell the Court briefly, with respect to the 16-ounce bottle what your figure is? A. For the 16-ounce bottle, $466,806.60.

Q. And would you state into the record how you computed that figure? A. That was by multiplying the number of cases of 16-ounce bottles, 79,796 times the five-case price of $5.85.

Q. And you reached this figure of $466,806.60? A. Yes.

Q. And now with respect to the 32-ounce bottle, tell us how you figured it and what the end total value was? A. Well, the 32,476 dozen multiplied by the five-case price of [437] $10.05 for a total of $326,383.80.

Q. Now, have you added those two figures together, Mr. McCormack? A. Yes, I have.

Q. And what is the total amount that you reached, dollar value, using this maximum case price that Colgate marketed in this bottled insecticide in the year 1958? A. $793,190.40.

Q. I will hand you Plaintiff's Exhibit II and ask if you would just write on that here, using my pen and in ink, these figures that you have just related with respect to the total dollar value concerning the 16-ounce bottle, the total dollar value concerning the 32-ounce bottle, and then the total of the two figures.

And have you now done that pursuant to my request, Mr. McCormack? A. Yes, I have.

Mr. Headley: All right. No more questions.

Cross-Examination by Mr. Schmidt.

Q. Mr. McCormack, do I understand that all of the figures and all of the calculations concerning which you have thus far testified relate to 1958 only? A. Yes.

Q. And relate solely to the 16- and 32-ounce bottles with the [438] sprayer hanging on the side? A. Yes.

Q. Now, do you have comparable figures as to production and sales for 1957 of insecticide products? A. No, I don't.

Q. Do you have comparable figures for 1959? A. No.

Q. Do you know personally when Colgate changed over from hanging the sprayer on the side of the bottle to a sprayer integrated with the bottle? A. Yes, in 1959.

Q. And you have no figures as to your sales in 1959 concerning the changed bottle, is that correct? A. No, I don't.

Q. How were insecticides commercialized and placed on the market in 1957? A. They were sold in cans.

Q. The aerosol type? A. We only had canned insecticides.

Q. But was it solely aerosol or was it a liquid insecticide, or do you know? A. I don't know.

Q. Do you know when Colgate first started hanging the sprayer on the side of the bottle? A. In 1958.

[439] Q. So in 1957 Colgate was not, so far as you know, selling liquid insecticide? A. I don't know.

Q. You don't know. Do you have any idea at all, generally speaking, how your sales compared '57, '58, '59, '60 and so on? A. No, I don't.

Q. You have no such data? A. Not with me, no.

Mr. Schmidt: Thank you.

Re-Direct Examination by Mr. Headley.

Q. Mr. McCormack, you were asked only to check and bring with you sales figures for the year 1958? A. Yes, for bottled insecticides.

Q. And to your knowledge, was 1958 the first year Colgate came out with bottled insecticides and with a sprayer attached by means of a cardboard collar? A. Yes.

* * *

Mr. Conrad: Your Honor, we took some testimony during which reference was made to this enlargement of Figure 8 in the Livingstone '480 patent, which is also [440] colored to illustrate the outline of certain parts. I would like to have that marked in evidence as Plaintiff's JJ.

The Court: It will be received in evidence.

(Plaintiff's Exhibit JJ marked for identification.)

Mr. Conrad: Your Honor, we also have an enlargement of one of the drawings of the Mellon patent, which is in evidence and which will be referred to in the course of our expert's testimony. I would like to have that marked in evidence as Plaintiff's KK.

The Court: Admitted in evidence.

(Plaintiff's Exhibit KK marked for identification.)

Mr. Conrad: Yesterday, we put in evidence a model of a sprayer device with an overcap which was stipulated

to have been in use in this country, I think the date was since 1940.

Mr. Schmidt: I beg your pardon, you say since 1940?

Mr. Conrad: No—did I say since 1940?

Mr. Schmidt: I was wondering whether you said that.

Mr. Conrad: What I am about to say will indicate I didn't mean it if I did say it.

Mr. Schmidt: Thank you.

Mr. Conrad: Your Honor, we have here a [441] deposition of a Mr. Richard High taken in Boston in which this was identified, that is this Exhibit Z, and during the course of which Mr. High explained that the production of this was discontinued sometime ago because of the high cost of making it. I would like to offer in evidence as Plaintiff's LL the deposition of Mr. High.

Mr. Schmidt: No objection.

(Plaintiff's Exhibit LL marked for identification.)

(Plaintiff's Exhibits JJ, KK, and LL received in evidence.)

[442] Mr. Conrad: Your Honor, I found on looking over the record yesterday that we had overlooked offering in evidence three of the patents which are mentioned in the file history of the Scoggin Patent in suit. I would like now to put in evidence as Plaintiff's Exhibit MM, a copy of the Slade Patent No. 2,844,290, dated July 22, 1958.

Mr. Schmidt: No objection.

Mr. Conrad: As Plaintiff's NN, a copy of Nilson, United States Patent 2,118,222, dated May 24, 1938.

Mr. Schmidt: No objection.

The Court: Admitted in evidence.

Mr. Conrad: And as Plaintiff's OO—

The Court: Going back to the patent to Slade, what is the name of it? I just don't find it here.

Mr. Conrad: The number is 2,844,290.

The Court: I have it.

Mr. Conrad: That is MM, your Honor. As Plaintiff's Exhibit OO, a copy of the Darley Patent, United States Patent 1,447,712.

Mr. Schmidt: No objection.

The Court: Admitted without objection.

Mr. Conrad: This is March 6, 1923.

(Plaintiff's Exhibits MM, NN and OO marked for identification and received in evidence.)

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[443] DOUGLAS F. CORSETTE,

being produced, sworn and examined as a witness on behalf of the plaintiff, testified as follows:

Direct Examination by Mr. Conrad.

Q. Will you please state your name? A. Douglas F. Corsette.

Q. Where are you employed, Mr. Corsette? A. I am employed by Calmar, Inc.

Q. That is the plaintiff in this action? A. The plaintiff in this action.

Q. How long have you been with Calmar? A. Over four years.

Q. What is the nature of your work with Calmar? A. I am vice-president in charge of engineering and development.

Q. Have you had any secondary education? A. I have a Bachelor and Master in Engineering from Purdue University.

Q. What experience have you had with the design and manufacturing assembly of sprayers such as are involved in this case? A. Including the S-25, our regular sprayer, I was employed prior to my association with Calmar with a company which was constructing an automatic assembly machine for the [444] purpose of assembling these devices.

Q. What experience have you had with sprayers after you came with Calmar? A. I was continuing development of this assembly machine and was working. getting familiar with the operation of the plant itself, and its requirements with respect to engineering, machinery, and the development of new products.

Q. Now, did you participate in the design of the accused SS-40 sprayer which has been spoken about here? A. Yes.

Q. Now, I direct your attention to Plaintiff's Exhibit G. Will you explain what that is and tell if you know how it was made? A. Plaintiff's Exhibit G is a working model of the showing depicted in the Scoggin Patent. It was made by a company called Scale Design, Associates, which constructed this model from a scale drawing. This scale drawing was created by taking a photograph of the actual patent showing and from that negative creating a reproducible vellum master, from which the prints were run, contact prints were run in order to provide Scale Design, Associates, with the precise showing of the Scoggin Patent.

Q. Have you examined the model? [445] A. Yes.

Q. Are you satisfied it is in accord with the design that had been laid by this photograph? A. I believe it is, yes, a good representation.

Q. Now, I direct your attention to this model that bears the legend, "Calmar SS-40", and ask you if that fairly represents the structure of the sprayers that Calmar makes and sells commercially under the designation of SS-40? A. I believe it does.

Q. Can you explain to us how that model was constructed, if you know? A. That model was constructed by the same concern, also from a drawing which was printed from a vellum. The vellum was created by our draftsmen.

Q. It is your opinion that the vellum which was used was an accurate representation of the construction of the SS-40 which was made and sold by your company? A. As usually can be expected it does represent the SS-40 as commercially sold.

Q. Now, I would like to have that model which has just been identified by the witness marked as the Plaintiff's PP.

The Court: Marked and admitted.

(Plaintiff's Exhibit PP marked for identification and received in evidence.)

[446] Q. I now direct your attention to the drawing I am holding up. Will you tell us what that is? A. That is a drawing which I believe is the same construction as

the model, shows the same construction as the model, referring to our SS-40 sprayer, and there are some blurred areas in the duplication process, some of the lines have run together.

Q. You feel this fairly represents the construction of your commercial sprayer? A. Yes.

Mr. Conrad: Your Honor, I would like to have that drawing just identified marked as Plaintiff's QQ in evidence.

(Plaintiff's Exhibit QQ marked for identification.)

Q. Mr. Corsette, I would now like to have you explain to the Court the construction and operation of the accused SS-40 device and in making this explanation, feel free to use the exhibits you see about you, if you think they can best be used to make this explanation. A. I think with respect to the operation of the pump, that has been adequately described, especially with respect to its ability to reciprocate and dispense liquid in the form of a spray. As I refer to some of the significant features as shown on the working model I would like to mark them on this Exhibit QQ. Basically the significant [447] features of the SS-40 consist of the manner in which the pump itself is prevented from exuding liquid through or around the pump itself. These seals are made by contact on the element of the piston which we call the probe, which descends from the center of the piston down through the center area of the coil spring, such that it impinges on the top of the lower valve ball when it is depressed to the bottom of the cylinder. In this position pressure of the plunger on the ball forms a double seal by the ball in contact with the ball seat itself and the other by contact of the ball with the normal discharge channel of the sprayer. This seal is located with respect to the other elements of the plunger, barrel and retainer such that when the plunger is depressed, then the overcap, first contact is made between the probe and the lower ball. I shall mark that on this drawing as "1".

The Court: May I ask you, when you depressed that it looked like the plunger was of some plastic material?

A. This plunger is of a polyethylene plastic which is called linear polyethylene.

The Court: Then it conforms to the contour of the ball as it goes down? A. Yes, it is deformed over the ball such that force applied to the top of the plunger is exercised in flaring the probe [448] over the top of the ball. In this manner, the inside corner of the probe then is contacted in spherical surface to the ball and it will flare out.

The next element which comes in contact as the plunger is depressed is the tapered skirt of the head which I shall designate "2" on Exhibit QQ. This taper is dimensioned such that it comes in contact with the retainer just before it strikes the bottom seat of the collar which I shall mark "3" in Exhibit QQ. The height of the head is dimensioned such that the distance from Point 3 in QQ is high enough so that it will not permit the overcap seal which I shall designate generically as element "4", for the reason that if Point 3 is shorter or—let me correct that—if Point 3 does not come in contact, the seal will not be formed at that point. Therefore, the overcap must not of itself prevent this seal from being engaged. Thus the height of the cap or the top of the head, which I shall point an arrow in here and call it "5" is a reference or datum with respect to the seals, as is the top of the lower valve ball designated in the area "1". Thus it is seen that if the dimension of the overcap in the area of the seal, taking any point thereof with respect to the top of the head would permit a restriction in the downward movement of the overcap, then it would be impossible to engage the [449] internal seals designated at "1", "2" and "3". It can be shown that this engagement between the head, and I am going to give the head a number, "6", and the retainer, "7", is a rigid one. When you bring these two members together and point 3 is engaged, then that is as far as it will go. Therefore, this seal in the area 4 has to be insensitive to precise vertical position because of certain variations in the amount of shrinkage, if the overcap shrinks excessively then it is too short and, therefore, if we have had a seal such as has been referred to in the Scoggin Patent, we would not be able to be sure that these internal seals would be engaged because one of them would undoubtedly be out of engagement at the time that the overcap seal was engaged.

The overcap and the head are dimensioned such that the external surfaces which I am going to mark on the head, this circle "8" is the boss, extending on the front of the spray head surrounding the orifice disk which creates the spray, and it is annular in nature when viewed from the front, and I am going to draw another number "8" also to the lower surface, but it also includes the curved connecting line between these two designations as shown in the back half, since the head in this QQ Exhibit is assumed to have been cut on the center line.

[450] An additional point on the head which I shall designate as "9" is an element referred to as a boss, which also is shown in contact with the overcap. These elements 8 and 9 are dimensioned so that they fall on the surface of a cone, which would be represented by the envelope of the overcap. Thus, in this manner when the cap is dropped down to the head in production, the head necessarily orients the cap, coaxially with the plunger. In this manner it is assured that with the guide provided for the plunger by the retainer at point 10, and its tight fit in the lower skirt 11, plus the piston fit at point 12, it can be seen that the plunger will reciprocate on its axis and thus hold the overcap likewise on its axis for proper engagement between the cylindrical sleeve flange of the overcap seal which may be described as a ring attached within the overcap, and molded integrally therewith. This cylindrical sleeve is dimensioned to engage with a corresponding annular groove in the collar which has been referred to as a retainer previously, such that parallel faces may be brought into engagement with respect to forming a seal between the seal ring of the overcap and the annular groove of the retainer by what might be termed a working fit between parallel cylindrical surfaces of the two mating members.

[451] Q. Mr. Corsette, I wonder if you could now illustrate the operation of the seals which you have described with reference to QQ by using this movable model PP. A. When the pump is manufactured it is manufactured, first, without the overcap in order to permit the solvent bond between the retainer and the barrel extension to cure to the extent that it will be a rigid engagement. When the overcap is applied it is brought down by

an overcap torquing machine which depresses the plunger into engagement, first, with the ball and then with the lateral faces of the conical skirt of the head into the conical well of the retainer, and as the torque is applied to the overcap the force is continued to be applied auxiliarly by the capping machine such that the threads then will hold the plunger in this position with the head firmly bottomed on the flat of the retainer marked 3 in Exhibit QQ.

Q. Now, when this seal is made at this point—that is, what you have marked as point 3, I believe, in QQ—is there any further downward movement of the head after that time? A. No, there is not.

Q. Now, at that time what is it, if anything, that is preventing the cap from going any further down? A. It is the rigid engagement between the retainer and the [452] head itself.

Q. Well, now, suppose that instead of that that these seals between the overcap and the collar were such that they would engage and prevent any further downward movement of the cap. What would be the consequence of that? A. It would leave, as you have shown here, a gap between the lateral face of the cone and at the bottom of the head, which would mean that the plunger had not been depressed to its full, lowermost position.

Q. What would be the consequence of that? A. If the plunger is not fully depressed then the internal seal has not been made in the area marked 2 and 3.

Q. Well, is there anything about the design of this overcap-to-retainer seal that assures you that you will get this head-to-collar seal established? A. Dimensions of these elements are such that there is a gap at the rigid members of the overcap—pardon me, at the rigid member of the retainer with respect to any facing surface on the overcap.

Q. Now, perhaps we can clarify this some by comparing the design of the seal that is described in the Scoggin patent between the overcap and the retainer with the design of the seal that is involved in the SS-40, particularly with reference to this matter of the seal being the thing which prevents the contact between the bottom of the

overcap and [453] the top of the container cap. A. I don't know what the procedures are in assembling the commercial embodiment of this device designated—is it Exhibit G?

Q. G. A. Designated Exhibit G, which portrays the elements shown in the Scoggin patent. However, they must in some manner screw the overcap on to the container cap, whether it is first snapped over and then turned tight or whether it is threaded all the way. In any event, the overcap will progress until some surfaces are brought into engagement which will stop the downward movement.

Q. Now, does the stopping of the downward movement by the seals in the Scoggin patent have any consequences with respect to the plunger? A. There is no consequence with respect to the plunger as long as there is still movement of the plunger below that point where the overcap seals are engaged. If there is a point reached where the plunger has reached its bottom position before the engaging surfaces of the seal between the retainer and overcap have been made, then the seal cannot be brought to bear unless the plunger is made short enough so that there is still overtravel of the plunger possible in order to avoid critical dimensioning between the top of the overcap, the shoulder, I believe [454] designated 50 in the patent, of the overcap, and the length of the plunger with respect to the internal elements, including the internal length of the cylinder barrel and the spring.

Q. Are there any seals which are put into effect in the Scoggin device by movement of the plunger? A. There are no seals whatever on the plunger that serve to prevent leakage from the container.

Q. What is the only thing involved in the Scoggin device, then, which stops the downward travel of the overcap? A. The only elements in the Scoggin device which limit the downward travel of the overcap and thus—

Q. Just in general, is it that seal between the overcap and the retainer? A. Yes, it is; it is just the seal.

Q. Now, is that the way the Scoggin device is designed to establish that clearance between the bottom of the cap skirt and the top of the container? A. Yes.

Q. Now, could you have such a design in your device, depicted in PP, of that overcap-to-collar seal? A. No, this would not be—

Q. Why couldn't you have that? A. For the reason that it would prevent engagement of these seals designated 1 and 2 and 3.

[455] The Court: While you are on that subject, I see a ball also in exhibit—what is this one over here? It isn't marked on the front of it and I can't tell.

The Witness: G—Exhibit G.

The Court: G. I see a ball at the lower end of the barrel immediately below the spring. Now, what—

The Witness: This is merely a valve ball, your Honor.

The Court: It is a valve ball. Does that perform any function other than simply operating up and down because of the fluid that is drawn in and goes out?

The Witness: None, sir.

The Court: I don't explain it well, but—

The Witness: I think you did well. That's what it does. It is a check valve.

The Court: There is no contact, as I understand, between the spring immediately above and adjacent to that ball and the ball itself as the plunger is raised or lowered.

The Witness: If there is spring contact against this ball, then the suction available on this device is such that this valve will prevent fluid from [456] being drawn into the barrel, and until, at least until, the plunger is far enough up so that the spring pressure has been relieved from the ball.

The Court: But when the plunger is down and the cap is on and the plunger is down, there is no contact between the spring and that ball in the Scoggin patent, as I understand. Am I correct in that?

The Witness: I know of none.

The Court: All right. It may or may not have any significance. I don't know, but I am just looking at it. Very well.

Q. (By Mr. Conrad) Now, I believe I asked you a little earlier to tell why it wouldn't be possible to use in your device the kind of an overcap-to-collar seal that is shown

in the Scoggin patent, and as I understood your answer, you said that if you employed a seal which stopped the downward movement of your cap that you very well might not get this important primary seal closed. A. That is correct.

Q. So that this primary seal between the head and the retainer was what had to be closed first, and you had to be sure you got that closed? A. Yes.

Q. And in order to be sure you got that closed this design of the overcap-to-collar seal had to be such that it would [457] not interfere with stopping the downward movement of the overcap which was necessary to close this main seal, is that right? A. Yes.

Q. Well, now, will you explain to us the actual details of construction of this overcap-to-collar seal? A. This depending ring is a parallel sided cylindrical member forming an annular ring around the inside of the overcap such that when the combination is made, this ring will enter the groove in the retainer in a relationship such that contact, lateral contact, is made on at least one of the parallel facing surfaces, of which there are several, and this arrangement is what is termed a labyrinth type of seal. I think that zigzag path, looking in the cross section view of QQ, will demonstrate the use of the term "labyrinth". At the outset of this engagement the most probable surface to be contacted is the one which I am designating with a broad line, which I will number 13, and this surface on each member, when in contact with each other, permits a rotational relationship of one cylinder within the other, and if the head is in place this seal ring will be brought down into the groove in a position such that there is a gap at the area which I will designate 14, which refers to a specific zone within the general area previously designated 4. There is also another element [458] on this ring, which I refer to as a feather flange. This feather flange is a depending sleeve member located such that its inner surface is coincident with the inner surface of the principal sealing ring of the overcap, and its dimensions are five thousandths wide by ten thousandths long, so constructed as to be of a fragile nature. This member, in the normal assembly, is held away from the bottom of the annular groove in the area I shall designate 15. In this manner

the normal position of the overcap permits the thrust of the threads which is generated at the point I mark 16 to provide the downward force holding the plunger seal engaged at 2 and 3 and the probe ball seal at 1.

Q. What is the idea behind putting that so-called feather flange down at the bottom of the sealing ring? I mean, why change the cross-section of the sealing ring? Why not use the same cross-section of the sealing ring right down to the bottom instead of reducing it in order to form that feather flange? A. We removed additional material from the bottom of this depending ring as well as to provide one corner of this depending ring which will be able to enter the groove first before the principal flange is brought down into the groove, thus there won't be any corner interferences.

Q. Now, is the size and strength of that so-called feather flange sufficient to stop the downward movement of the [459] overcap if it should make contact with the bottom of the sealing groove? A. No, it is not.

[460] Q. I wonder if you have one of your actual production caps with you which you perhaps could show the Court and point out the corresponding elements in the production cap to those that you have referred to in Plaintiff's Exhibit QQ. Mr. Corsette, I have this sectioned model of the SS-40, you might want to use. A. Here is a section model of the SS-40 which has been cut down through the overcap and the retainer, apparently without any corresponding cut being made on the head.

Q. Now, will you point out to the Judge the important elements involved in making the seals that you have referred to earlier in your description of QQ? Excuse me, I mean point them out on the model. A. This model, since the overcap has been sectioned, it has removed half of the material supporting the thrust against the top of the dome, by the head into the collar, therefore, there is some distortion because of the cut-away, but the depending member of the seal consists of this ring, having parallel cylindrical sides and having this member we refer to as the feather flange at the lower inside corner, and its inside surface is continuous with the inside cylindrical surface of the ring itself. The gap is prevented from clos-

ing at the top outside element of the collar by a support of the overcap from within provided by the rigid head being spaced from the seat [461] within the retainer. The barrel has not been sectioned on that member to disclose the inner members of this combination.

The Court: This exhibit does not show or does it, the action of the barrel? In other words, this SS-40, Exhibit PP, this isn't big enough. I cannot see those things that are. What I am getting at, well, it is designated as you have marked 2 on your exhibit here, QQ, where does that downward element designated as "2" by your broad marker, where does that show up on this particular cut-out exhibit? A. That is this surface around the head, your Honor (indicating).

Q. (By Mr. Conrad) Do we have one there with just the parts, you can point it out more particularly? A. I have what we call a sub assembly.

The Court: In other words, that is just a flange that seats in the corresponding cylinder or whatever you call it, taper?

A. Yes, that is right.

Q. (By Mr. Conrad) Is that one of the old primary seals we have been talking about? A. Yes, it is.

Q. Is that the seal you say might not be established if the downward movement of the overcap was interfered with by earlier engagement of the overcap also? A. Yes. [462] Q. Now, is there any such head on the collar seal involved in the Scoggin device? A. Not in the Scoggin device.

Q. Now, in view of what you have said, Mr. Corsette, I would like to ask you this: In what respects, if any, does the SS-40 overcap, the collar seal designated by you as "4" on Exhibit QQ, act to maintain the lower edge of the overcap out of contacting relationship with the cap of the container when the member is on the retainer, the member being the overcap, in a position so that both the seal at "4" is tightly engaged? A. The seal at "4" cannot serve to maintain the clearance at the bottom of the overcap because if it did, it would prevent the engagement of the internal seal.

Q. Now, I place along to your left Defendant's Exhibits 102, 104, 106 and 108, which are the physical models and the photographs marked Defendant's Exhibits 110, 112, 114 and 116. Have you had an opportunity to examine them? A. Yes, I have.

Q. Now, in what respects, if any, do you find them representative of the overcap with collar seal which was actually used in the SS-40 construction which has been made and sold by Calmar? A. They are not representative of the commercial embodiment of our combination.

[463] Q. Will you explain why you say that? A. The first observation is that the head is missing in all cases; therefore, these models have been made without the internal support on the top of the head, from the head itself, to maintain the seal at points "2" and "3".

Q. I take it from that you mean in the absence of this head, the overcap is able to come down much more easily and perhaps in some different relationship with respect to the retainer than it would have been able to do, if this had been present? A. This is true, in addition to several other factors.

Q. Well, mention the other factors. A. These models, 102, 104, 106 and 108, have been screwed down on the collar member to varying degrees as controlled by spacer washers underneath the skirt of the overcap and caught down in that position, so that first the overcap is being used in a manner with upward thrust against the bottom of the overcap in bottles 102, 104 and 106. In addition to this, there is a quadrant, approximately a quadrant cut away in each case.

Q. Are you now referring to the models 102 to 108? A. Yes, in the models 102 through 108, there is approximately one quadrant cut away from the top to at least halfway down the overcap skirt; therefore, the circumferential continuity of these elements being represented [464] has been interrupted, these elements in their normal configuration constitute a hoop relationship. This configuration behaves in the manner of a hoop such that if force is applied either from the outside or the inside are absorbed in circumferential tension or compression as is a hoop.

When you cut a section out of it, the member is stressed in a manner of bending such that what is left of the hoop then is exercised in bending.

Q. Excuse me? Could you translate that for us with respect to, say some common experience we all have, like cutting a hoop, if you like? A. I have made a couple of examples to illustrate this using some elements that are normally familiar to everyone. I have a polyethylene tumbler which in this case is regular polyethylene as to distinguish it from lineal polyethylene, and it has a continuous annular configuration, and in the area of the upper condition, it is a hoop such as that if you squeeze it from the outside or you stretch it from the inside or apply any pressure on it, it behaves, if you perform the same pressure all the way around, it is either in compression or in tension throughout the periphery of the member, and to illustrate the effect of sectioning, I have an identical tumbler purchased in the same package, constituting the same material, and both of these are the same color and blue. [465] This is approximately a quadrant that has been cut away and by comparison, in one hand or the other compare the resiliency of these two members from the standpoint of their interrupted geometry. I can translate this in terms of relative forces. If you were to question the amount of force being applied in any case we can hold both tumblers by the base, place the cut edge of one tumbler against the solid cylindrical wall of the other, press them together and note the relative displacement. This demonstrates that with exactly the same force applied to each, the relative deflection is distorted in the cut example and it is resisted by the whole.

Q. To what extent has that phenomenon you just described relate with respect to the samples, that is, the models 102 to 108? A. The apparent angularity which is purported to be disclosed by these models and corresponding photographs is induced by some lateral movement of the relative elements, related elements.

Q. Give us a specific example so we will know exactly what you are talking about. A. For instance, in terms of the amount of deflection caused by this cut section compared to the uncut section, referring now to the

photograph, Defendant's Exhibit 110, corresponding to Defendant's model Exhibit 102, this [466] lateral deflection is related in terms of the actual size, the retainer in this scale is two and a half feet in diameter.

Q. You mean if the whole device were shown in the same scale as the part is shown in that exhibit in your hand, this retainer would be two and a half feet in diameter? A. Yes, and the actual physical deflection of the member in this particular picture is approximately one-thousandth.

Q. How big is one-thousandth? A. It is about one-fifth or one-sixth of the thickness of an ordinary sheet of paper.

Q. Now, is it your point that bringing the hoop such as you have talked about might have caused that downwardly extending collar to look as though it were off to one side instead of straight up and down? A. That is part of it, yes.

Q. Is there another part? A. Another part is that the related dimensions to the proper assembly of this overcap are concerned with the relationship of the continuous thread on the retainer as it is normally disposed from the top of the retainer and the number of degrees of engagement when the collar is threaded down. Therefore, in addition to the section deficiency, we have also the fact that the overcap has [467] not been symmetrically assembled because the spacer washer underneath has held the threads in a position such that it will require in the case of model 102 approximately, well, it would have to be approximately 90 degrees of thread engagement to illustrate what happens when the overcap is applied.

Q. I get from what you say there that in the bottles, or at least in that one bottle, if your thread is only engaged more or less in one side so that the cap is pulled down crooked, is that it? A. Yes, sir.

* * *

[468] Q. Mr. Corsette, before we return to the discussion of Defendant's Exhibits 102 through 116, I would like to ask you if you can give us any simple illustration with your hands of the nature, say, of a labyrinth seal as compared, say, to a pressure seal.

The Court: What kind of a seal?

The Witness: Labyrinth.

A. You might compare labyrinth—

The Court: Give us the definition of "labyrinth seal".

The Witness: A labyrinth seal is a type of interengaged parallel surfaces that are not necessarily fixed with respect to one another, which might be demonstrated by telescoping the fingers together endwise parallel.

The Court: I assumed it was, but I wanted it in the record so I would have it there.

Q. (By Mr. Conrad) Now, a pressure seal, so-called. A. And a pressure seal might be illustrated by pressing your two fists together, flat surface against a flat surface, the pressure being exerted perpendicular to the plane of the surfaces.

Q. Now, with respect to the overcap-to-collar seals in the SS-40 and in the Scoggin patent, which are involved in each? [469] A. Would you repeat that again?

(Question read.)

A. The labyrinth type of seal is involved in the case of the SS-40, and the pressure seal in the case of the Scoggin patent.

* * *

[470] Q. Now, have you completed your explanation of why you didn't regard the Defendant's Exhibits 102 through 116 as representative of the commercial structure of the SS-40? A. It appears to me that Exhibit 108, which is a model of a cut-away overcap, does not correspond with Defendant's Exhibit 116, which purports to be a photograph of that, in that at the upper left corner of the outer annular ring of the retainer there is an area of the overcap which does not find its counterpart in the cut-away [471] exhibit in that there is a void in this area in the photograph, which indicates evidence of having been cut, and the relative length of the depending annular ring, when measured with respect to the other views, indicates an out-of-scale length, which tends to confirm this opinion. If I measure on the drawing 110, for instance—excuse me, photograph, Exhibit 110—which purports to be a photograph of the model Defendant's Exhibit 102, not including

the feather flange, the scale of this drawing would indicate a length comparable to the length including this area at the top left corner such that this portion of the photograph which purports to come in contact with the outer annular ring apparently has accrued because of burring the edge of the cut with whatever instrument made the slice.

Q. Now, do I understand from what you said that by inspecting some of these other exhibits and the other photographs that you are able to tell that this space here, to which I am pointing, which appears to be relatively narrow, should be much wider than it is? A. Yes.

Q. And that if it were—will you indicate with your fingers approximately what the proper width of that space would be, as you have determined it? A. On the photograph, the proper width would be approximately [472] in the neighborhood of a quarter-inch on that scale.

Mr. Schmidt: May I ask counsel what photograph you are now referring to?

Mr. Conrad: I was referring to Defendant's Exhibit 116.

Mr. Schmidt: You jumped from 110 to 116, is that correct?

The Witness: Yes.

Mr. Conrad: The question I put to the witness was with respect to 116.

Mr. Schmidt: Yes, just so I understand.

Mr. Conrad: Thank you. I appreciate the correction. And the space to which reference was just made in this question is that between the upper outer edge of the collar and the bottom of the groove in the overcap.

Q. (By Mr. Conrad) Now, do you have any other comments with respect to these Defendant's Exhibits 104 through 116 on which Mr. Fishleigh's testimony regarding infringement was based? A. An additional comment about the lateral deflection which induces an apparent angularity would be made with respect to the effect caused by the cut-away upon the thrust of the threads in the case of model 108, which does not have a spacer washer beneath the skirt, but which same [473] overcap has been apparently overtorqued to the point where at least the cut-away portion shows contact with the block, this dis-

tortion is created by having 270 degrees of upward thrust on the overcap, which is caused by contact with the threads, and on the other side a void with respect to any restricting member, and therefore an eccentricity is induced, pulling the overcap into its distorted shape.

Q. Now, with respect to this matter of getting an overcap on straight, does the presence of the plunger have anything to do with that? A. Yes, the presence of the plunger is instrumental in keeping concentricity of these related elements during assembly because of contact of the conical inner wall of the upper portion of the overcap engaging with the elements shown as 8 and 9 on the head in Exhibit QQ, coacting with a flat surface-to-surface contact at the top of the head between the top of the head and the inside top of the overcap.

Q. Now, could the plungers have possibly been in place when defendant's models 102 through 108 were prepared? A. I don't conceive of a method of making these models without disassembling the structure as manufactured and creating a new assembly not representing that which was produced.

Q. Now, were you here when Mr. Fishleigh was telling how [474] these models were prepared? A. Yes, I was here.

Q. Now, did you understand from that that these caps which are used in models 102 through 108 may have been being applied for the second time when these models were prepared? A. I'm not sure that that was made perfectly clear. It had to have been at least more than that, because they were applied originally in our manufacture, and subsequently they were removed and cut and somehow replaced.

Q. Well, now, as a practical matter in the conduct of your business, what, if anything, do you say to your customers about removing a cap and replacing it because of the effect it might have on the seals? A. In every box that is shipped containing SS-40 shipper sprayers, we include a printed instruction sheet in bold face type, giving instructions that the overcap must not be removed in order to avoid disturbing the seals.

Q. Now, what is the reason behind that? A. Because the proper relationship is acquired in assembly in our plant, and the disturbing of these seals means that they have been taken out of their proper relationship and that they will not return to that relationship.

Q. Now, can you tell from an examination, for example, Defendant's Exhibit 108, whether or not the overcap and the collar which are comprised in that exhibit were cut at the [475] same time? A. No, they were not cut at the same time.

Q. Well, now— A. At least in one significant case—in the case of Exhibit 104, if the collar and the overcap were cut at the same time, they have been subsequently disturbed. In the case of 102, it is not clear. However, in the case of 108, whether it has been disturbed or not, it has definite indication that they could not have been cut at the same time because of the difference in amount of cut-away. The groove and the collar have been cut away to a greater extent than the cut-away of the collar, indicating that the collar could not have been cut at the same time the overcap was.

Q. What effect would that have on the validity of the model as representing the commercial structure of the SS-40? A. It has no relation to the structure of the SS-40, because the overcap was applied to an incomplete collar.

Q. Now, in examining any of those models, do you find that the relationship of the overcap and the retainer on one side of the cut, as depicted in the photographs, is any different than what can actually be observed on the other side of the cut on the very same model? A. I would say that the two sides are not in complete agreement.

Q. Do you have any further comment on the Defendant's Exhibits [476] 102 through 116? A. In Defendant's Exhibit 116 the outer annular ring of the retainer appears to have been deflected outwardly, indicating a response to an excessive amount of pressure, and the broken hoop is perhaps a major contributing factor to its yielding, coincident with the eccentric nature of the load.

Q. Any further comments on those exhibits, Mr. Corsette? A. No.

[477] Q. Mr. Corsette, I have mounted to your right Defendant's Exhibit 120, which was referred to Mr. Fishleigh in the course of giving his testimony concerning the applicability of these claims in suit to the SS-40. I now direct your attention to those Figures 1 and 2, to which he referred, which were reproductions, I believe, of Figures 1 and 2 of the Cooprider Patent, and ask with respect to the seals shown whether there are any differences between the Calmar SS-40 as made and shown in the construction in Fugures 1 and 2 of Defendant's Exhibit 102? A. On the showing of Figures 1 and 2 of the Cooprider Patent, as shown on Defendant's Exhibit 120, it shows a different combination of seals from what is used in the commercial model of the SS-40.

Q. Now, just for the assistance of the Court, Mr. Corsette, you might move your drawing of the SS-40 into proximity with the Defendant's Exhibit 120, and perhaps that will enable you to better compare the two showings. A. In the Figures 1 and 2 of the Cooprider Patent is shown a shipper sprayer of a type having a probe seal in the same general area as does the SS-40. However, the significant difference lies in the nature of the head to collar seal of the two different models, and the overcap to collar seal as well and their intended functions. [478] In the case of the Cooprider Patent, there is not shown a gap at the outer annular ring of the collar below the corresponding face of the overcap and the nature of the seal as disclosed by the Cooprider Patent between the head and the collar is one of telescoping arrangement such that the lower portion of the head referred to as a skirt would descend into a slightly conical well in the collar to permit some variation in the vertical position of the plunger; in other words, to accommodate tolerances while this is not true in the case of the SS-40. The commercial sprayer SS-40 has instead a rigid relationship between the head and the collar and its lower limit of travel of the plunger and a telescoping or sliding type of labyrinth seal in the overcap to collar seal.

Q. Now, will you point out what, if any, differences there are in the form of the retainer or collar shown in the Defendant's Exhibit 120 and the form of the retainer or collar which is actually employed in the commercial

Calmar structure? A. The retainer or collar in the Cooprider Patent is principally telescoped inside the barrel extension of the cylinder and it has also an annular groove but a much higher outside annular ring. The SS-40 has external engagement of the retainer and barrel extension and the [479] top of the outside annular ring of the retainer is relatively shorter and the retainer of the SS-40 has a strong lower seat to receive the head and to stop its downward travel while in the case of the Cooprider showing there is not that engagement of the bottom of the head for the seat and the collar.

* * *

[420] Cross-Examination by Mr. Schmidt.

Q. Mr. Corsette, I would like to point up a few miscellaneous matters first. If I understood you correctly, in referring to the Plaintiff's Exhibit G, you were speaking about screwing the overcap onto the container. Did you intend to say that? A. I thought I said "retainer".

Q. You said "retainer", not onto the container. All right. Now, with respect to the drawing that you utilized in producing Exhibit QQ, is not that the same drawing, if you recall, that was referred to during your deposition as Exhibit 29? Do you recall that? A. It may be although there were two such drawings at least in exhibits during my deposition. This may have been one or the other.

Q. I show you the Wise Deposition Exhibit 29, and ask you to compare it with Plaintiff's Exhibit QQ, and tell me whether or not they are not identical? A. Some of the numbers on Exhibit 29 have not been reproduced on Exhibit QQ, but from what there is I would say that they are intended to be identical.

Q. I am not concerned about that. All I want to know is whether or not QQ was taken from Wise Deposition Exhibit 29? [483] A. Apparently it was.

Q. Now, is that Deposition Exhibit 29, in your opinion, an engineering drawing? A. In the technical sense of engineering drawings having dimensions which are used for the purpose of controlling truly, this is not an engineering drawing.

Q. Would you term it a somewhat freehand sketch? A. It is not freehand. It is termed a sketch in our terminology to differentiate between types of drawings.

Q. Is it to scale and taken directly from a device? A. It is essentially to scale with respect to the principal components.

Q. Could that drawing be used by mold makers, for example, in producing a mold in turn to produce the SS-40? A. In the true sense of the term "mold maker", I believe that it could be done if he were to exercise the liberties of a mold maker in arriving at the proper dimensions of the tooling.

Q. If he followed Plaintiff's Exhibit QQ, and used that as his guide for all dimensions, would he then come up with the SS-40? A. One thing that is not clear on Exhibit QQ, which I pointed out earlier, is a blurring of the lines, especially in the area designated "4", especially with respect to the designated No. 14 on QQ, which is clearly shown [484] as a gap on Exhibit 29 of Wise's Deposition.

Q. Aside from that, would he have all of the dimensions and all of the tolerances that he needs to come up with the SS-40? A. He would not have dimensions.

Q. Would he have tolerances? A. I see no reference as to what tolerances are given. He would as a mold maker have to determine those.

Q. If I recall it correctly, at the time of your deposition and at the time of Mr. Wise's deposition, you had no engineering drawings, do you recall that? A. Showing this assembly?

Q. Yes. A. We still have no engineering drawings showing this assembly.

Q. And that is the best that you had from which to in turn make the Plaintiff's Exhibit PP, is that correct? A. This Plaintiff's Exhibit PP was made from a drawing such as Exhibit QQ.

Q. Such as? I understood in your direct testimony that they were made directly from QQ? A. I said it was made from a drawing such as QQ, in that the drawing which was used to produce the original of Exhibit 29 shows cross-sections or section lines on the various components and the

drawing, the specific drawing from which the Exhibit PP was made, because Exhibit QQ [485] was, this exhibit was made from the drawing which was made from the original of QQ.

Q. Do you have the drawing from which Plaintiff's Exhibit PP was made? A. I do.

Q. Do you have it with you? A. I am not sure whether I have one with me or not. I don't believe I have.

Q. Will you check during the recess? A. I will check.

Q. Now, you say you still have engineering allowance. Do your mold makers use Plaintiff's Exhibit QQ for the purpose of making molds? A. They do not. They work to detailed engineering drawings of tooling.

Q. Then you do have engineering drawings, is that correct? A. Yes.

Q. Yet you are exhibiting what purports to be the SS-40 from Plaintiff's Exhibit QQ, rather than from engineering drawings, is that right? A. Our engineering drawings show tooling, they do not show an assembly of the sprayer components.

Q. I would like you to be more specific as to the dimensions and tolerances. A. They may be out of scale but they are intended to be [486] in scale and the dimensions control specific size and configuration.

Q. So we do not have any drawings that are comparable to your engineering drawings or mold drawings that will clearly and exactly illustrate the nature of the SS-40? A. We have drawings of the tooling, engineering drawings of the tooling.

Q. You suspect you may have those with you? A. I doubt I may have those except those that may appear in the Wise deposition exhibits.

Q. Now, let us compare Plaintiff's Exhibit QQ with Plaintiff's Exhibit PP. Is it your contention that Exhibit PP is identical with QQ? A. As nearly as the people who made the model could follow it, it is. The master from which the print was made for PP was an auto-positive reproducible vellum which was made by a blueprint company from the master of this Exhibit QQ, but it was section lined.

Q. As I understand your direct testimony, the inner and outer surfaces of the groove within the retainer in QQ are supposed to be cylindrical and parallel, is that correct? A. Yes.

Q. And also in connection with QQ, the inner and outer surfaces of the rim that extends down into such groove [487] are supposed to be vertical, cylindrical and parallel? A. Yes.

Q. Does it follow then in accordance with QQ, the inner and outer surfaces of the groove, the downward-facing groove, and then the overcap are parallel and cylindrical? A. They are in the tooling.

Q. In the drawing? I am speaking of the drawing, QQ. A. I believe that in the drawing they are also shown that way.

Q. Then, tell me why that has not come out in the Model PP. A. To what respect are you referring?

Q. With respect to those parallel, vertical, cylindrical surfaces. A. I can't say unless it is an accumulation of paint.

Q. You had a scale or ruler or gauge that you were using on direct. Will you step over and measure and tell us whether or not those surfaces are all in the model vertical, parallel and cylindrical? A. The only surfaces that I can measure on this member are this and this (indicating), referring to the outer annular ring of the retainer in the Exhibit PP and the depending annular ring representation on the model as part of the overcap. In this illustration in this scale I consider it fairly close representation considering the fact that in shipping it here there was some damage which [488] had to be repaired in order to illustrate the workings of the model.

Q. Will you measure across the groove in the overcap both at the base and at the open end of the groove? A. On which side?

Q. Either side or both. A. On the right side the top and bottom of the groove is the same. On the left side there is 12-thousandths difference between the top and bottom.

Q. Is that not more properly and correctly illustrative of the true nature of the cover cap of the SS-40 than Plaintiff's Exhibit QQ? A. I couldn't agree with that.

Q. Why not? A. The Plaintiff's Exhibit PP was not actually made by us. It was made from a drawing made by us and in illustrating the principles of operation of the SS-40 itself, the people who made the model apparently were unable to adhere to machining tolerances in that scale on masonite.

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[489] DOUGLAS F. CORSETTE,

resumed the stand, having been previously duly sworn, and testified further as follows:

Cross-Examination (continued) by Mr. Schmidt.

Q. Do I understand your testimony to be, Mr. Corsette, that all of the surfaces adjacent the overcap to collar seal are in fact at all times vertical, parallel and cylindrical? A. As they are molded, yes.

Q. Do they remain that way after the parts are taken from the mold? A. Yes.

Q. Do they remain in that condition after the cover cap is placed on the collar? A. I believe they do.

Q. How do you know that? A. I would think that these X-rays tend to indicate that.

Q. Can you show us in the X-rays? Can you illustrate where [490] in the X-rays that is demonstrated? A. There appears to be vertical entry of the sleeve into the collar well.

Q. But I mean can you point it out in the X-ray itself other than having us hold it up and look at it? Is that the only way we can tell? In other words, do you have anything else to demonstrate what is shown in the X-ray? A. Well, the tooling drawings that we submitted with the Wise Deposition Exhibits show the perpendicularity of the tooling.

Q. Yes. Do you have any drawings showing the parts themselves after they are taken out of the mold? A.

There is also a drawing of the overcap, submitted with the Wise Deposition Exhibits, which we discussed at the time of those exhibits was not an accurate representation.

Q. Do you have any engineering drawing showing an accurate representation of the parts of the SS-40? A. Not of the parts.

Q. Now, which particular devices were used when the X-ray was made? From what parts were the X-rays made? Do you have those here? A. No, I don't. I did not make the X-rays.

Q. Who did? A. I believe they were made—I couldn't say who made them.

Q. Do you know when they were made? [491] A. I couldn't say that.

Q. Do you know where the sprayers are from which the X-rays were made? A. I couldn't say.

Q. I hand you Defendant's Exhibit 121, and ask you whether or not you are the Douglas Corsette who is named as a co-patentee therein? A. I am.

Q. Are you familiar with that patent? A. In a general sense, not specifically.

Q. You are in fact a co-inventor of the subject matter of the patent, are you not? A. Yes.

[492] Q. I hand you now Defendant's Exhibit 122, which is the file history of the Corsette patent, Defendant's Exhibit 121, and I will ask you to turn, first, to page 39 in Defendant's Exhibit 122, and refer, if you will, to lines 7, 8 and 9. Now, you will recall, I believe, hearing Mr. Fishleigh read into the record the fact that at that time, which is April 12, 1959, that it is said that the embodiment, preferred embodiment, illustrated in Figs. 1 and 2 of the drawings are now in large scale, commercial production. Do you agree with that statement? A. I do not. The Figures 1 and 2 were never in commercial production.

Q. So there has never been a change in the actual production of SS-40, is that correct? A. No, sir. I mean yes, it is correct.

Q. That is correct. And Figs. 1 and 2 then do not, as alleged in the representation to the Patent Office, represent a commercial production. A. In detailed configura-

tion they are not—they represent a change in the thinking of the seals with respect to which is rigid and which are yielding.

Q. Why did you make a change? A. It was found in the course of trial tooling that the difficulty in maintaining the telescoping type of seal [493] between the head and the collar, both members being rigid, it was difficult to rely on as a shipper sprayer; therefore, there was a change in the concept of which seals were rigid and which ones were yielding.

Q. Well now, I note in Plaintiff's Exhibit G, that there has been provided in part a yieldable corner. Are you familiar with that construction? A. Yes.

Q. I am speaking of the yieldable corner in the cover cap. A. As illustrated by the Scoggin patent picture.

Q. Yes. Now, in Plaintiff's Exhibit PP you have no such yieldable parts except for the probe, is that correct? A. Are you referring to the specific materials with which the model is made?

Q. Yes. A. Yes. Where there was expected to be yielding in the member, the model makers put a resilient material in order to respond to the picture in the case of Exhibit G, the picture of the Scoggin patent disclosure, and in the case of the Calmar SS-40 model, Plaintiff's Exhibit PP, the cylindrical nature of the seals there did not require that the overcap itself be made of rubber or otherwise simulating the flexibility as the case of the Exhibit G, the overcap itself is also made of the same material, which is a masonite type of sheet material.

[494] Q. A relatively hard, non-yielding substance, isn't that right? A. That is right. And in the case of the Scoggin patent, in order to show what the patent had disclosed, a piece was cut out and a piece of the overcap material was cut out, and inserted was a sponge rubber member faced with a clock spring steel in order to permit it to slide down the conical segment on the retainer, to simulate the flexibility of the seal on the—purported to be on the Scoggin device. On the Calmar SS-40, the cylindrical nature of the two mating members was such that it was not required to simulate the entry of the depending ring on the overcap into the annular groove in the collar.

Q. You did not feel it was necessary to provide yieldable material at the sealed area between the overcap and the collar in Plaintiff's Exhibit PP, is that right? A. It is yieldable only in the sense that the entire overcap is yieldable.

Q. It is yieldable in much the same sense as the material from which the defendant's structure is made, is that not correct? A. With the exception of the rubber insert on the—

Q. I mean in commercial production. A. Would you state that again, please?

Mr. Schmidt: Would you read the question?

[495] (Question read.)

A. What is yieldable?

[496] Q. I am saying that the materials used by Calmar— A. You are referring to models—

Q. I am referring to the commercial exhibits. A. The material from which the Calmar overcap is made I believe is of a higher hardness than that with which the Bakan overcap is made, from the feel of the material it would seem that way.

Q. I don't care to belabor the question. All I want whether or not the material in each instance is somewh. yieldable in both instances? A. Yes.

Q. Now, therefore, referring to Plaintiff's Exhibit PP, when I press downwardly on the top of the cover cap as I am now doing, what is it that prevents further downward movement of the cover cap with respect to the collar? A. In the model itself it is the engagement of the head with the collar or retainer.

Q. And that is at the point that you designate "3" in Plaintiff's Exhibit QQ, is that not correct? A. "3" and "2".

Q. Now, in Plaintiff's Exhibit PP, by virtue of the hardness of the material from which the collar is made and the hardness of the material from which the head is made, it is not possible for me to push this cover cap down any farther, is that not right? [497] A. Depending upon what you push it with, and the point at which you will break one or the other of the members, or both. In

normal assembly that is as far as it will go, when it is bottomed.

Q. But the slight pressure that I am placing on the cap at this time? A. That is not the normal pressure, or whether it is possible to destroy the model.

Q. But it is true that the reason I cannot put it down farther without extreme amount of pressure is because of the non-yielding nature of the materials from which the collar and the head are made? A. That is right, that is essentially a rigid relationship.

Q. Now, is that the same relationship that you would get in the SS-40 itself? A. I am quite sure it is.

Q. Notwithstanding the yieldable nature of the materials from which the head and the collar are made in the SS-40? A. The materials from which the head and collar are made are relatively unyieldable with respect to what the material or the cooperation in connection with the amount of force being applied.

Q. Let me ask you how you know in the SS-40 that the relationship between the cover cap as applied is precisely as illustrated in perhaps Exhibit PP when I push the cover [498] cap down as far as I can with a normal amount of pressure? A. In the course of the development we have found what the length of that composite stack, as you refer to it, should be, and it is on the production line held to within the required limits of total length from the bottom of the washer probe to the top of the head.

Q. What are those limits? A. I don't recall offhand.

Q. Do you know the tolerances? A. The tolerances on the total stack are, I don't recall what they are specifically; they are comparatively narrow with respect to the accumulated pile-up, if you were to consider the tolerances of each component.

Q. What are the dimensions of the retainer? A. I think that they are approximately, quite closely as shown in one of the drawings in the Wise deposition exhibit.

Q. Do you know the tolerances? A. I think they are probably the usual mold and tolerances for rigid vinyl.

Q. Are those normally close tolerances as far as that material is concerned? A. Yes, they are quite close.

Q. They can be maintained? A. Yes.

[499] Q. Do you have the dimensions of the overcap? A. The tooling dimensions I believe are on one of the drawings in the Wise deposition exhibit, with the exception of one deviation of a dimension which is missing and was pointed out in my deposition.

Q. Those dimensions that you are now talking about are mold dimensions, are they not? A. Yes, sir.

Q. I am speaking about dimensions of the parts after they are removed from the mold. A. The required dimensions are established through testing and gauges are set to control; the measurements are taken in the production to maintain those limits.

Q. You do not know what those dimensions are? A. I do not have all of those dimensions in mind.

Q. And the dimensions in all of those plastic parts do change, they are different from the dimensions that you have set up in the mold? A. Are you speaking in terms of shrinkage?

Q. Yes, perhaps. A. Yes, perhaps will shrink from what the cavities or the mold components are at the time that the plastic is injected into the cavity and, therefore, it is after they are put together that we establish the control.

Q. Now, looking again at Plaintiff's Exhibit PP, where will [500] you have the greatest amount of shrinkage, at the time that the product is in the mold or after the removal in the covercap? A. It will shrink greater in length in proportion to the other dimensions, I would say.

Q. It will shrink more vertically of the cover cap than transversely? A. Not necessarily in the same ratio.

Q. What about the shrinkage in the area of the cover cap to collar seal? A. Are you speaking of transverse or vertical?

Q. Both. A. Well, it is difficult to say just which direction shrinks the most at that particular point since we measure the part after it has been molded to determine its suitability.

Q. Let's take the lowermost end of the sealing ring, that is designated "90" on the patent, and compare the shrinkage there with the upper end of that ring. A. I don't believe 90 refers to the same thing in both instances.

Are you referring—the depending member within the overcap in its entirety in the case of the Cooprider Patent and what portion were you referring to?

Q. That is the portion that is called a ring in your patent. A. What do you wish me to compare?

Q. I am asking you about the shrinkage characteristics at [501] the lowermost end of that ring as compared with the upper, the base end of the ring. A. That would be hard to say because the drawing is suppositionally in this case such that the mold tooling would be adjusted to compensate for any discrepancy between what was desired and you couldn't compare the shrinkage of an actual part with the element here.

Q. I mean in actual practice, where do you get the most shrinkage? A. In the components?

Q. Yes. A. I would say principally in the side walls of the cap.

Q. Where as between the upper end and the lower end of the ring? A. The axial shrinkage; I would guess it would be fairly uniform in a shrinking condition.

Q. But you don't know. You are guessing, is that true? A. Are you talking of axial shrinkage?

Q. Yes. A. Seeing no restraint I would say, yes, that is true.

Q. I believe you indicated that in the SS-40 that in truth there is a clearance at the sealed portion such that you get no bottoming in the grooves of either the collar or the cap, do I understand you? A. That is in the ring "4".

[502] Q. Yes. A. On Exhibit QQ.

Q. In the SS-40 as commercialized. A. It is conceivable that the feather flange on the lower internal extremity of the seal ring of the overcap could touch the bottom of the annular groove; however, there will be a gap at the point indicated "14" on the Calmar SS-40 drawing shown as Exhibit QQ.

Q. How great a gap? What is the clearance? A. It is approximately in the neighborhood of 20-thousandths or more.

Q. How do you know that? A. From the dimensions of the related members which hold the overcap out of engagement.

Q. That you said you didn't know what the dimensions were? A. We have the mold parts and we know when we are—if we are not getting a seal at any given point by our lab tests, then we can adjust such that we know that the overcap depresses the head into engagement in the area "2", and "3", and the dimensions that were controlling on the overcap have been established to prevent the seal from engaging any horizontal or limiting surfaces to prevent the overcap from pulling the thrust down to the plunger.

Q. Do you mean to say that the tolerance on this type of material is such that you can maintain that precise [503] amount of tolerance at all times? A. We have gauge limits which the quality control people monitor perpetually throughout the production runs of overcaps to maintain them within the gauge limits of the overcap.

Q. Do you mean to say that the materials from which the head and collar are made are of sufficient relative rigidity that it would be impossible to permit the head to go down farther at point "3" and close that minute gap that you allege at the top of the ring of the collar? A. Yes, and I have a cut-away of some of these components which might illustrate this. I have a cap portion such that the skirt member of the cover cap has been cut away as not to cut any of the surfaces of the annular seal ring flange, and the hole cut in the top to see the engagement with the top of the head and the internal plunger in sub-assembly arrangement with the collar and you can determine the rigid nature of the engagement of these two members and you can insert these members in their assembled relationship to see that you cannot press them further together.

Q. Now, you have the parts assembled. Can you tell now by looking at it that you have no gap? A. It is evident from this model that there is a significant gap at the place indicated on these components.

[504] Q. That is the seal area "4"? A. Yes.

Q. Is that also true to your visual inspection of the cross-sectional model that you were working with this

morning? A. The cross-sectional model that I was working with this morning apparently has a similar gap, although it has been sectioned through the overcap and collar, but the gap appears to be there as well.

Q. Now, is that gap more clear to you than the section model that you have just examined and more clear to you in the larger model, Plaintiff's Exhibit PP, insofar as accurately telling us what this is all about and than can be determined from the photographs, Defendant's Exhibits 110, 112, 114 and 116? A. The photographs are pictures taken of cut-aways where the hoop relationship has been disturbed and the cut has been made through the contours of the related elements, such that their true relationship is obscured.

Q. What do you have to demonstrate and show us insofar as exactly what we have here is concerned that is more reliable and more easily understood than those photographs? A. I believe I can by examination of this member where I have cut away the overcap skirt exposing the external surface of the annular seal ring of the overcap, that perpendicularity to the plane of the bottom extremity is indicated when compared with known parallel surfaces.

[505] Q. Now, that is all you have, your testimony as you see that, as compared with the photographs, is that correct? A. That is all the evidence that I have with me with respect to a physical demonstration of this cylindrical nature of the seal, the seal ring on the overcap.

Q. And that is all you have with you with respect to telling us the details of construction of any of the parts of the collar and the overcap, is that not correct? A. The detail—detailed type of construction of the collar has been described in the Wise deposition exhibit drawings, Exhibit G, tooling dimensions of that part, with the noted exception of the one missing dimension discussed at my deposition.

Q. And with the exception that we don't have any drawings or dimensions of the parts themselves after they come out of the mold? A. That is right.

Q. Take another look, if you will, at Defendant's Exhibit 110, a photograph. Do you see in that photograph

that the upper edge—the upper edges, I should say—of the ring, the outer ring of the collar, are rounded or beveled? Does that not so indicate? A. That appears from the photograph to be true.

Q. Now, do you have any doubts with respect to that being true and accurate? [506] A. There probably is some tiny radius as indicated by the point of the cutting tool that made that diameter in this particular case, that a perfectly square corner in this magnification is quite impossible with any cutting tool.

Q. You do not have that rounded corner, those two rounded corners, depicted in Plaintiff's Exhibit PP, do you? A. At least not in scale, there appears to be slightly rounded corners on the Exhibit PP. What their dimensions are specifically, I couldn't say on the model.

Q. Do you have any disagreement with the shape and configuration of that outer ring of the collar as shown in Plaintiff's Exhibit 110—Defendant's Exhibit 110, I'm sorry. A. I would have to compare it with the drawings to be sure, but I would say in this scale that this is not a bad representation.

Q. What drawings did you want to compare it with? A. In Wise deposition drawing, I believe these may be a radius indicated on that drawing, a slight radius, usually similar to breaking a corner.

Q. Didn't I understand you to say there were no parts drawings? A. There is a picture of a part. It is not a detailed engineering drawing.

Q. Since it is not a detailed engineering drawing, you can't [507] very well make comparisons, can you? A. It is not a detailed engineering drawing in that sense, but is only indicative of how the tooling should be made.

Q. Do you have any misgivings with respect to the shape and configuration of the depending ring from the overcap as shown in Defendant's Exhibit 110? A. Yes, it shows here, as indicated previously, in Defendant's Exhibit 120, represented in the stage 1 view, as showing some angularity of the depending ring, which amounts to a lateral displacement of something in the neighborhood of one-thousandths of an inch.

Q. I am speaking of the shape and configuration of the ring 90. A. I think the indicated angularity is part of the configuration as it deals with its location in the overcap.

Q. Is there not a difference between attitude and position and configuration in your mind as an engineer? A. Where configuration is related to a relative position I think it is pertinent.

Q. Does the word "shape" help you? A. Yes.

Q. Do you have any misgivings as to the shape of the element 90? A. I think that probably that radius shown on the lower left extremity of the element is within the scope of what [508] might be expected on this scale.

Q. Now, again in Defendant's Exhibit 110, do you have any misgivings with respect to the way in which the ring makes initial contact with the collar? A. Yes.

Q. What are those misgivings? A. I believe that the depending seal ring of the overcap descends vertically into the annular groove of the collar.

Q. And upon what do you base that belief? A. By the control with which we measure our production and as indicated on these models which I have in my hand, showing the entry of this depending sleeve into the collar.

Q. Do you mean to say to us, Mr. Corsette, that you can tell more accurately from your own eye looking at that small model where initial contact is made than you can in an enlarged photograph of the structure itself? A. The enlarged photograph is made of a section which is not assembled in the normal relationship in which these members meet.

Q. Do you have anything to show us that is as accurate as those models from which the photographs were taken? A. At this position the collar and overcap have approximately one-quarter turn of thread engaged, and it would rely upon the positioning of the overcap by the plunger member [509] to hold it in its proper position.

Mr. Schmidt: Would you read the question to the witness, please?

(Question read.)

A. By that do you mean accurate representation of the model or of the production conditions?

Q. (By Mr. Schmidt) Of the SS-40 as you allege it was being produced. A. I believe that the X-rays mentioned earlier more closely depict the relationship.

Q. And it is your position that those X-rays are better capable of showing where that initial engagement is effected than you can tell by looking at Defendant's Exhibit 110? A. I believe they indicate a straight entry.

Q. I ask you to look at this X-ray again and tell me whether or not the X-ray indicates in any way at all where the initial engagement is between the ring 90 and the proximal part of the collar? A. The X-ray does not show the overcap in the same position as Exhibit 110.

Q. Then you have nothing to demonstrate to us what takes place when an initial contact is made between the parts of the overcap and the collar? A. This is not their normal assembled relation. I do not.

[510] Mr. Schmidt: Would you read the question, please?

(Question read.)

A. No.

Q. (By Mr. Schmidt) Tell me now why, when you commenced working with Mr. Cooprider on the SS-40, you found it necessary to provide a cover cap-to-collar seal? A. I believe it was a principle of redundancy or repetition whereby in the normal production procedures if any one of the internal seals should fail that there is another downstream stop.

Q. And is it your feeling that the SS-40, as today commercialized, has a cover cap-to-collar seal for no good purpose whatsoever? A. I believe that redundancy is a good purpose in that if a faulty part should permit a leak or, such as a nick on the head, that the overcap seal would serve as a backup.

Q. What is your definition of redundancy as you are now using it? A. An additional member serving a purpose of adding additional seal.

Q. That is your definition of redundancy? A. The overcap is an additional seal external to all seals which we have referred to as internal seals.

Q. And therefore it is redundant? [511] A. It is not redundant in the sense that it is the same kind. It is redundant only in that it is an additional seal, as far as the package itself is concerned, including the container and its contents.

Q. When does it seal? A. It functions to stop leakage only if seepage should get into the overcap.

Q. When is the seal effected at area 4 during assembly of the overcap on the collar? A. It is effected when the head has reached bottom in the collar or retainer.

Q. If I understood your direct testimony, the first seal that is effected is at 1 in Plaintiff's Exhibit QQ? A. Normally that is true, yes. That is dimensioned so that 1, the seal at 1 in QQ is the first element to be engaged.

Q. Now, you have a full seal at that time. That is your seal—you would not leak from that point on, is that correct? A. That is the seal which blocks flow through the normal discharge channel.

Q. And yet the plunger is not yet at the lower end of its path of travel, is that correct? A. That is correct.

Q. Now, where is the second seal effected? A. When the plunger hits bottom in the collar, when the head [512] engages the collar at point 3.

Q. And then you have a seal established at 2? A. Yes.

Q. In Plaintiff's Exhibit QQ? A. Yes.

Q. Has that done anything to the previously established seal at 1? A. I should think not.

Q. Notwithstanding the fact that the plunger went down farther? A. The plunger went down farther, yes, to engage the tightness—to exert pressure on the seal at 1.

Q. Now, where is the third seal established? A. The third seal is established between the overcap and the retainer.

Q. At area 8 in Plaintiff's Exhibit QQ? Or maybe I misunderstood you. I'm sorry.

Mr. Schmidt: Would you read his answer.

(Answer read.)

Q. (By Mr. Schmidt) You mean at 4, at area 4? A. Yes, area 4.

Q. That seal is effected after the seal is established at 2 in Plaintiff's Exhibit QQ? A. Because of the telescopic nature of these elements in the labyrinth configuration, it is difficult to say at what [513] point you do first have a seal. At least, you are sealed in that area by the time the plunger is down to its bottom position.

Q. It follows, then, that you could have a seal in area 4 before you have reached the bottom of the path of travel of the head? A. Slightly before, this is possible.

Q. Now, when do you effect the seal between the overcap and the head at the area 8? A. I couldn't say, as we—in the commercial embodiment we do not actually evaluate this area as a seal.

Q. You do not? There is no collar-to-head seal in your SS-40? I'm sorry, no cover cap-to-head seal in your SS-40? A. Those areas are—in their original design they are designed to fall on the same surface, and it was thought originally that we would pursue a seal in this area, but as in the commercial embodiment it is primarily for centralizing the overcap, and the degree of seal that is obtained at that point I couldn't determine.

Q. Then, as a matter of fact, insofar as you know, you have not been able to successfully commercialize the SS-40 and effect a collar-to-head seal? A. I would say rather that we hadn't tried. We found that the seals—when we got into production the seals between the head skirt and the retainer, and the cup washer and [514] the ball, when assembled were quite reliable and that the overcap seal with the collar was merely an added feature.

Mr. Conrad: Excuse me, Mr. Schmidt. Will you reread the question?

(Question read.)

Mr. Conrad: Collar-to-head seal?

Q. (By Mr. Schmidt) Again I'm sorry. I think you and I were thinking the same thing but were saying a different thing. We were talking about an overcap-to-head seal. Now, does that change your thinking? A. Yes, it does. We have a reliable head-to-collar seal, but we have not in the zone designated 8 in Plaintiff's Exhibit QQ evaluated this seal.

Q. Now, with respect to the redundancy of your over-cap-to-collar seal, I ask you again to pick up Defendant's Exhibit 122, the file history of the Corsette-Cooprider patent, and will you turn to page 50, and refer to lines 3, 4, 5 and 6, please. Have you read what is stated in those lines? A. I don't recall that I did.

Q. I mean have you now read it? A. Yes.

[515] Q. Do you today disagree with the contention therein made and representation made to the Patent Office in your prosecution of your application that the cap to collar seal is an important feature of your invention? A. In that it is to come into play only upon failure of one of the internal seals, this is an added safety feature.

Q. Referring now, if you will, please, to page 63, will you refer to line 16, commencing with the words, "In order to", read, if you will, please, those two sentences commencing at line 16. A. "In order to effect a satisfactory seal, the sealing surfaces must be angularly related to the plunger axis, whereby downward movement of the plunger permits the application of pressure between the sealing surfaces."

Q. And the next sentence. A. "Where the engaged surfaces are parallel to the plunger axis, as in the cap and head of Fischman, the application of pressure to effect a seal is obviously not possible."

Q. One more question, Mr. Corsette. Do you agree with the statement made by Mr. Wise that there are in fact instances in your SS-40 sprayer wherein there is leakage into the upper overcap? A. There has been in some tests indication as in any production item, occasionally a reject might cause some leakage into the overcap.

[516] Q. Would you find in those instances that the overcap was effective in preventing such leakage from flowing externally of the cover cap into the outside container? A. Generally speaking, it is.

Mr. Schmidt: Thank you.

A. In the commercial embodiment.

Re-Direct Examination by Mr. Conrad.

Q. You still have in your hand the Cooprider file wrapper? A. Yes, sir.

Q. Will you turn to page 52, please? A. Yes.

Q. Do you see the paragraph there beginning, "In order"? A. Yes.

Q. Will you read the first sentence of that paragraph into the record, please? A. "In order to provide an effective seal, it is necessary (1) that contact between the sealing surfaces be made under substantial pressure, and (2) that the sealing surfaces be formed either to provide an elongated tortuous path through which the liquid must pass, or some wedging action such as is provided at 24, 25 in Fischman."

Q. Now, Mr. Corsette, at some point in your discussion with Mr. Schmidt, you used a model which you had prepared I believe in which you cut away the cap skirt so as to [517] reveal the seal flange on the o[illegible]ap? A. Yes.

Q. What was your purpose in making that demonstration? A. The purpose of making the demonstration was to illustrate that actually the external surfaces that are visible on this portion of the overcap will indicate when observed between known parallel surfaces that the depending seal ring of the overcap is cylindrical.

Q. Did you also use that to show some way that when the plunger was fully depressed that there still was a gap between the retainer and the bottom of the groove in the overcap? A. Yes, I have the sub-assembly of the plunger element assembled with the retainer in such a manner that the force with which the head is able to resist pressure into the collar is exhibited and the corresponding relationship with respect to the sealing element of the cap and head, as the overcap is held from further downward movement by the head, leaving a gap at point designated "14" in Exhibit QQ.

Q. May I have that, please?

Mr. Conrad: Your Honor, I would like to mark that in evidence as Plaintiff's Exhibit UU.

* * *

[518] LAWRENCE C. KINGSLAND,

being produced, sworn and examined as a witness on behalf of the plaintiff, testified as follows:

Direct Examination by Mr. Conrad.

Q. Will you please state your name and occupation? A. Lawrence C. Kingsland. I am a lawyer practicing patent and trademark law.

Q. You are a member of the firm of Kingsland, Rogers, Ezell & Robbins? A. Yes, sir.

Q. You have been a member of the Bar with the State of Missouri since the year 1907, and are a member of the Bar of the United States Supreme Court? A. That is correct.

Q. You were registered to practice in the Patent Office in 1909 and have been engaged in the practice of patent and trademark law since that time? A. That is correct.

Q. And in the course of that time you prepared and prosecuted many hundreds of applications before—

Mr. Schmidt: If your Honor please, we shall be happy to stipulate as to the qualifications of this [519] gentleman.

Mr. Conrad: I appreciate that offer on behalf of Mr. Schmidt but I would like to have the qualifications in the record very briefly, your Honor.

The Court: Very well.

Q. (By Mr. Conrad) You have appeared as counsel in patent infringement suits representing clients, both plaintiffs and defendants? A. Yes, sir.

Q. You have argued patent cases in the Courts of Appeals in all Circuits and have appeared in patent cases before the United States Supreme Court? A. That is correct.

Q. You have testified in the Federal Courts as a patent expert and acted as a Master in patent cases? A. I have in a number of cases.

Q. In 1947, at the request of the Phillipine government, you traveled in Manila and worked with judicial officers and prepared a draft of patent and trademark law? A. Yes, sir.

Q. And that draft was adopted by the Legislature as the patent and trademark laws in the Phillipines? A. That is right.

Q. You were appointed Commissioner of Patents in August of 1947, and served in that capacity until the beginning [520] of 1950? A. Yes. I left there the first of December, 1949. I was on terminal leave until the first of the month.

Q. Since leaving the Patent Office, you have returned and still are engaged in the patent and trademark law? A. That is correct.

Mr. Conrad: Your Honor, I respectfully move the Court to rule that Mr. Kingsland is qualified to testify as an expert in this case.

The Court: Yes.

Q. Mr. Kingsland, what preparation have you made to testify in this action? A. About a year ago Mr. Cole got in touch with me and submitted to me a resume of the case. I at that time gave it preliminary study and prior to agreeing to participate at all I completed that at the end of, I think it was in February of 1961. I know it was over a year ago. Then I agreed to testify and since that time I have had before me practically all of the papers that have been between the parties in the way of stipulations. I have kept abreast of the case during that period of time and my study included, of course, study of the patent, the file wrapper, study of all of the prior art and a consideration of the accused structure primarily from information that was furnished me and information such [521] as I have heard from Mr. Corsette today. That has been my primary source of information with respect to the accused structure.

Q. Mr. Kingsland, I wonder if you will just very briefly describe to us the Scoggin Patent in suit which is Defendant's Exhibit 10? A. Well, there was a pretty good description of it in the early part of Mr. Fishleigh's testimony with respect to the structure itself. There are some comments, however, that I think may aid in connection with an interpretation of the claims that we are concerned with and I would like to make a few observations in regard

to that so that it will be a background for a consideration of the claim itself, Claim 1.

In the first place, in the specification, the thing that struck me in the beginning was the emphasis that was put upon the value of this overcap. The original objects did not include any reference to the seal between the overcap and the collar or retainer. I understood at the time I studied the patent that that was the issue, that is, the issue was on Claims 1 to 4 of the patent as it existed and, of course, I went back to see whether or not that had been an original purpose of the application or an original object of the application.

Now, of course, there are about four specific [522] objectives stated in the patent itself. The first one was to render the pump inoperable, enclosing a plunger and holding same at the innermost end of its reciprocable path of travel. I noted that. Then came specifically a hold-down cap that may be quickly and easily applied and moved by virtue of a releasable attachment to a part of the entire unit such as by use of screw-threaded interengagement with the part of the unit, and to advantageously employ a part of the unit which has a secondary function of attaching the barrel of the spray pump to the closure cap of the container.

Now, those were the objects that were stated and perusal of those objects indicated that so far as the seal which has become the critical matter that we are discussing here, was not mentioned at all in the objects.

I think that it may be helpful in understanding the specification, or the claims when we come to them to point to another matter in connection with the specification. I think the only reference that I have found in the specification to the clearance between the overcap and the container cap is that that is found in Column 2, line 58 and following. I have a transcript of that made and if the Court desires to follow it, or I will just read it as to what the subject matter included in that portion of the specification is.

[523] The Court: I have the specification. Go ahead.

A. It says, with respect to the clearance of the overcap and container: "A downwardly-facing shoulder 50 within

the cap 40 engages the upper surface of retainer 18, thereby preventing engagement between cap 40 and closure 14 to prevent forcing of the retainer 18 from its tight press-fit engagement with extension 22."

Now, I do not believe it will be necessary to cover those parts unless your Honor would like me to because I think we have already identified them in the testimony.

Q. (By Mr. Conrad) Yes. A. But my point is that as far as I can find that is the sole reference to this clearance between the cap, the overcap and the container cap which has been the critical matter of discussion.

[524] Q. Yes. Well, now, with respect to that reference to clearance is there anything in it about sealing? A. Nothing there at all, at that point. There are some statements later with respect to two seals, and I have those here.

Q. I see. A. Now, there is one other matter that seemed important to me, and that is that additional seal between the rib and the annular surface of the cap adjacent to the shoulder, and we find that statement in column 2, line 67, and following, and the statement there is this: "In addition to the seal provided between the shoulder 50 and the top surface of the retainer 18, there is established an additional annular seal between the annular rib 56 and the annular surface of the cap 40 immediately adjacent to the shoulder 50. This seal is clearly illustrated in Figure 1." Now, I might comment on that, that that will be discussed, of course, when we come to a reading of the claim, but this is what the specification originally said with respect to that association of parts.

Now then, as to the additional seal between the rib and the corner we have this statement, and this is in column 2, line 72 and following. "The cross-sectional contour of rib 56 as shown in Figure 2 is shown to present an upwardly and inwardly inclined annular face which [525] snugly fits against the 'corner' or line of juncture between the shoulder 50 and the adjacent annular inner face of the cap." Now, that is the additional seal that has been discussed here in the evidence. Now, the definition with respect to the shoulder, we have that in column 3, lines 15 and following. "The material from which retainer 18

is produced is soft enough to be slightly compressed when shoulder 50 and the corner adjacent thereto ride along the upwardly and inwardly inclined outer face of the rib 50 when the cap 40 is moved to position." Now, I might comment on that, that the drawing in the Scoggin patent shows that the corner presses out against the—I want to get an illustration of that. No, in the Scoggin drawing of the patent—have you got that here? I thought we had a sheet of that.

Q. No, I don't think so. Do you have a copy of the drawing in your folder there? A. I have it right here.

The Court: Before we get started why don't we take a recess. It is a quarter after three.

(Whereupon, a short recess was taken.)

Q. Mr. Kingsland, you were about to make a comment, I believe, on the drawing of the Scoggin patent. A. Yes. I called attention to the specification where it said that the retainer was of soft material in the Scoggin [526] drawing, and I think it was pointed out by Mr. Fishleigh, in Figure 1 it is apparent that the drawing shows that what is the so-called corner of the shoulder is biased inwardly, which, of course, would be impossible if the retainer were softer than the overcap. I don't think it is of any great significance, but it is a conflict between the actual showing and the specification.

Q. Mr. Kingsland, will you turn your attention to the file history of the Scoggin patent which is Defendant's Exhibit E and comment on the nature of the agreement that was reached between the patentee and the Patent Office in connection with the allowance of the claims in suit? A. Yes. I think reference to this file wrapper is one of the most significant ways of getting at what the real agreement was between the examiner and the applicant resulting in the claims with which we are concerned here. First, to do that, I will have to go back to the beginning of what is revealed by the file wrapper. The first thing that struck me, and does, is the fact that the original application as filed was pointed to this idea that the overcap was the critical thing. In other words, it is perfectly apparent that that was what was thought to be novelty. Now, I think that could be illustrated by taking the first claim

of the application, and I think it is sufficient to [527] illustrate what I have in mind.

Q. That appears on page 7 of the file? A. That appears on page 7 of the file. And it will be noted that it starts out, "In combination with a sprayer unit for a liquid container, said unit including a closure for the container and a spray pump secured to the closure and provided with a reciprocable plunger; and a member holding the plunger at one end of its path of travel and releasably attached to said unit." Comment on that is that that is a combination claim at that point where the critical feature is this hold-down member and the member fits over the plunger and holds it at the end of its path of travel. Now, that—all of the original claims were built around that idea of combination of the spray unit with the plunger and with this overcap as being the critical feature. When that was examined by the Patent Office we find that it was rejected, all claims were rejected on the primary citation or indeed the only citation in the first Office action, which appears on page 12 of the file history. We note there, particularly the statement of the examiner, after saying that the claims were rejected as vague and indefinite in paragraph—in the center of the page—we take the last paragraph starting on page 12 and we have this statement: "Claims 1-11 are further rejected as substantially met by Lohse." [528] Now, Lohse is the patent cited and is the only reference in this action. It is number 2,119,884, and I believe it has here an exhibit number.

Mr. Conrad: That is Plaintiff's Exhibit T, your Honor.

Your Honor, I have here a colored enlargement of a drawing of the Lohse patent, which I would like to mark as Plaintiff's VV.

The Court: What is it?

Mr. Conrad: VV.

(Plaintiff's Exhibit VV marked for identification.)

Mr. Conrad: Your Honor, earlier we put in evidence as Plaintiff's Exhibit Z this form of the Lohse sprayer and the overcap which was marketed some years ago.

A. To continue with the statement of the examiner, "There is shown," in this patent, which is the Lohse patent, "the hold down member 12 releasably secured by screw

threads to a retainer 4 which slidably houses a reciprocable plunger 6. It is not patentably significant in the absence of some new or unexpected result that the Lohse patent does not show the barrel 24 of applicant's device as continuing up to the top of the container since this barrel is part of the pump structure and is [529] not seen to be essential to the essence of the present invention. Note therefore the barrel forming the piston chamber 16 of Lohse as being the full equivalent of applicant's barrel 24. It does not therefore appear to make any patentable difference whether the barrel is attached to the retainer and the plunger reciprocates therein, or is separate from the retainer and the plunger reciprocates through the retainer as seen in Lohse. The clamping nut 5 of Lohse performs the same function of holding the barrel in place as does the barrel extension of applicant's device."

Now, the important part of that is this—of that statement of the examiner. As I read this file wrapper, he never withdrew from that proposition that Lohse, so far as the overcap was concerned and so far as the combination as recited originally in the claim that I read, was not invention, and, of course, the claims were cancelled in the next action.

Q. Now, before you go on, Mr. Kingsland, I wonder if you would tell us briefly how the stated objects of the Lohse patent compare with the stated objects of the Scoggin patent. A. My recollection is that they are practically the same, and I would like to just briefly read—well, Lohse starts out with, "This invention relates to liquid [530] sprayers of the general type used for spraying liquid for various purposes while also making provision for convenient and safe transportation when filled or partly filled with liquid without danger of leakage of the contents. With these objects in view," and so forth. He there designates substantially the same element—I mean the same purpose—

Q. Yes. A. —as was originally stated in the patent in suit.

Q. Colonel, while you are catching your breath there, I would like to read into the record the second paragraph of Lohse, which is as follows:

"With these objects in view the invention comprises a bottle closure removably attachable to a bottle or other container and provided with a movable plunger piston and a liquid chamber, the closure being provided with removable sealing means, which serves both to prevent leakage of the liquid content to the outside and to retain the plunger in a depressed position to avoid the filling of the outlet conduit which forms a hollow stem for the piston." A. That, of course, expresses the same general objective originally expressed in the Scoggin patent.

Q. Yes. A. Now, I think while we are speaking of Lohse, it might [531] be well to point out from this model that this construction, which is one, as I understand, was actually used, was a commercial structure—Lohse screws the container cap directly down on the bottle neck, but he does have what we have referred to as the collar or retainer He has a seal between the overcap and the retainer or collar which consists of a washer, so that in effect he seals at the lower part of the overcap. That was argued later as being a distinction but was never accepted as a full distinction. Otherwise, you have got the container cap, you have got the retainer, and you have got the overcap, you have got the internal threads on the overcap, you have got the external threads on the retainer or collar, then you have got a seal between the overcap and— so that any accumulation of liquid in the overcap can't leak out during the time that the overcap is on. But I think I might comment here, because it's something that is important later, that both in Lohse and another one that we will mention, the Mellon patent, and, of course in Scoggin's, there is not a prevention of leakage into the overcap, but there is a seal between the base of the overcap and the retainer and above the closure cap for the container. So you see in all respects we have generally the same elements, broadly, in this Lohse patent, and as a result, [532] of course, the claims were cancelled, and that appears in the next amendment, which is an amendment that was filed in May 1958, according to this copy, and begins on page 14. There is there submitted a series of claims beginning with claim 16. Here the applicant is getting nearer a reduction of the claim to invention within the area of the closure assembly. It isn't quite stated

as it is later, but he does say in this claim 16, "In a cap for containers having a spray unit supported by the cap, including a reciprocable plunger extending through the cap and provided with a spray head." Then it will be noted that he says, "the improvement of which—" that is, the improvement of a cap for containers— "of which comprises a retainer attaching the unit to the cap and provided with external screw threads; and a hollow member," —which, of course, is the member 40— "for housing the head and maintaining the plunger depressed, said member being screw-threaded on the retainer and provided with a continuous internal shoulder, said retainer having a continuous rib in complemental, circumscribing engagement with the shoulder and disposed to hold the member out of engagement with the cap, whereby to prevent displacement of the retainer from said unit when the member is attached to the retainer."

[533] You will note here again he is trying to get some language that will accentuate the—the cap—but now brings in the idea of a seal, including the rib and the shoulder.

There is just one comment that was made by the applicant which seemed to have some significance.

[534] The Court: Excuse me, Colonel, before you go on with your remarks, would you comment on the fact that this engagement of the rib and the shoulder which is met in the Claim 16 is said to be for the purpose of preventing displacement of the retainer from the unit, when the member is attached to the retainer? A. We find in this specification that the only purpose assigned in the beginning was to keep the overcap from pulling the retainer or collar off because as originally described, this collar or retainer was said to be put on by pressed-fit. My understanding, and as I think Mr. Fishleigh testified yesterday, that the normal commercial practice is to cement or definitely hold that retainer or collar on the barrel of the pump, but the purpose that evidently was in view of the applicant at this stage of the prosecution was that the clearance below was to keep too much pressure to pull the container or ring from its tight-fit engagement with the barrel.

Q. This is the same clearance at the bottom which was later said to be there for the purpose of enabling it to make a tight fit? A. It is the same one, it is the same clearance, of course.

Q. You were about to go on with the remarks in the amendment. A. The applicant here said, on page 15, "Said claims clearly point out the novel features of Applicant's hold-down [535] unit whereby the entire assembly is maintained in a predetermined position as shown in Fig. 1 and where the cap and hold-down assembly are rendered leak-proof by the particular manner in which retainer 18 and hold-down member 40 are inter-engaged."

This is the beginning of the argument of the particular inter-engagement of the hold-down member and the retainer.

I have another part marked that has some significance. Speaking of Lohse, he said, "Clearly, such a provision for the prevention of leakage is not shown by Lohse who attempts to accomplish such results by screwing his hold-down cap 12 tightly against gasket 3 which is held between the cap of the bottle and the hold-down cap for the nozzle. Inasmuch as it is not desired in Applicant's device to have the hold-down member come in contact with the cap of the bottle, for the reasons previously mentioned."

Now, those reasons previously mentioned are to prevent collar from being displaced. "Applicant has devised the new and novel sealing features as are now set forth in Claims 16 and 17. It is to be further noted that a tight seal is further insured by making retainer 18 of a material soft enough to be slightly compressed when shoulder 50 is brought to bear tightly against rib 56." Another emphasis on [536] this press-tight fit between the corner of the shoulder and the rib which is shown as a conical surface, but those claims in the next action, page 18, were rejected.

Q. Mr. Kingsland, I understand at this point in the prosecution just summarize what you have said up to this point, the applicant originally started out claiming the combination of an old overcap and then he was shown Lohse and apparently realized that that broad combination was old, and then pointed out that he distinguished from Lohse by the fact that Lohse had the seal at the

bottom of the cap, whereas, his seal was up in the cap? A. That is correct.

Q. Will you go on from there, please? A. Well, the next action of the Patent Office appears on page 18 of this file history, in which two other references were cited. It is simply a restatement of the Patent Office's idea that Lohse met broadly the original claims and the claims as modified and narrowed up to this point. I don't find much significance in this particular action because as a result the claim, the two claims were cancelled in the next action on page 19 of the record.

Then we get to a series of claims after cancellation of these Claims 16 and 17, which included Claim 18 down through Claim 24, and we have the applicant contending [537] that he has now reduced the claimed invention so that it is allowable over Lohse and these two references which I didn't consider very significant because later on we find that we have much closer references, but in the remarks on page 22, the applicant said: "All of the previously submitted claims having been cancelled, Claims 18 to 24 inclusive remain for active consideration." Then the applicant goes on to say that they have considered the art and then comes the analysis of Claim 18, which is in this language: "Analyzing Claim 18, it is to be noted that this claim sets forth in approved Jepson form, the novel combination of retainer 18 and hold-down cap member 40 which cooperate to maintain spray head 34 and its associated plunger 26 substantially at the innermost end of its path of travel and at the same time providing a liquid tight seal between spray head 34 and the threaded interengagement of cap 40 with retainer 18. Particular note is directed to the limitations in Claim 18 relative to the provision of means on the retainer and cap member respectively providing a seal below spray head 34 and without the lower peripheral edge of cap member 40 engaging the upper surface of cap 14 on container 12." So the applicant is there urging that when he had claims such as 18, the seal, the nature of the seal, the fact that the seal between the overcap and [538] the ring was in the upper part and above the threads that connected the overcap to the ring. So the application stood until there was an interview between the Examiner and the applicant,

which preceded the next amendment which is found on page 29 of this file wrapper, and I think that is the key to the understanding of what was finally incorporated in the claims that we are concerned with.

Q. Well, turning to 25 and this amendment which you think eventuated in the patent's claim 1. A. He in this amendment after this interview submitted Claim 25, which became Claim 1 of the patent and that is the one that we are mainly concerned with because the Claim 2 is simply a dependent claim.

Now, in this amendment we have as Claim 25 what eventuated into Claim 1 of the patent as it now stands and these remarks reveal to me at least as to what happened. Remember that all claims have been cancelled and Claim 1 of the patent had been inserted and Claim 2 had been inserted by this amendment.

"Applicant wishes to acknowledge with appreciation the interview courteously granted by the Honorable Examiner and the cooperation received in the drafting of allowable claims which thereby place this application in condition for passing to issue.

During the subject interview, the Honorable Examiner [539] cited two additional patents not previously of record in the prosecution of this application and which were believed to be pertinent as to the allowability of Claims 18 and 19, presented in applicant's response of November 1, 1958." He is referring back to that Claim 18. Then he cites the new references. The one of significance is the reference to the Mellon patent. We have a representation of the patent.

Q. That is Plaintiff's Exhibit U. This is an enlargement of Figures 3 and 4 and was marked as Plaintiff's Exhibit KK. A. In this Mellon patent we have the pump and we have the overcap, and we have the overcap arranged with a seal or gasket above the screw threads, which had been one argument that had been made by the applicant as a distinction from Lohse. This patent shows that the seal is above the threads that contact the retainer and the overcap. It happens to be a gasket seal and in the drawing there is no mention, or in the specification, of how far down the cap goes but in the drawing

it happened to be shown as all the way down. There is, however, another Mellon patent which we may refer to a little later that shows that clearance. It is only important that the other Mellon shows it because I consider these Livingstone patents definitely show it, but now we have the situation [540] where we have the claim amended after a substantial rejection of the Claim 18 because that was withdrawn and these new claims were submitted after this discussion with the Examiner and because of the importance, as I see, of these remarks, I am going to read them: "These new patents were carefully studied during the interview and agreement was reached between the Honorable Examiner and applicant's attorney relative to limitations which must be in the claims in order to define novelty over the previously applied disclosure of Lohse when considered in view of the newly cited patents of Mellon and Darley, Jr. It was pointed out that although Mellon does disclose a hold-down cap for liquid spray containers wherein a seal was effected between spray head and screw threads, neither of the patentees disclosed a closure assembly wherein annular segment or rib 56 on retainer 18 and shoulder 50 on cap 40 were disposed in such positions as to cause the lower peripheral edge of cap 40 to be maintained out of contacting relationship with cap 14 when cap 40 was screwed tightly on retainer 18 to cause shoulder 50 to be moved into sealing engagement with rib or segment 56."

Now, the applicant is arguing that the novelty rests in the clearance provided, and that clearance was provided by the stoppage of the downward movement of the overcap, so that the lower marginal edge of the overcap wouldn't come in [541] contact with the bottle cap because he argues further: "Lohse's cap 12 clearly moves into contacting relationship with gasket or washer 3, inasmuch as this is the point of sealing engagement between cap 12 and the cap unit 1 on container A, while in Mellon, it also appears, as best shown in Fig. 3, that cap 28 also engages the margin of bottle 10 defined by the ring surrounding the tubular open top thereof. Thus, the obvious modification of Lohse in view of Mellon would be merely to provide the seal 32 of Mellon within Lohse's cap 12 in a position to engage the upper part of central

headed thread 4, while the lower peripheral margin of the cap remained in tight contacting engagement with either the cap on the container or a circumferentially extending projection on the container tiself."

Now then the applicant repeats this on page 33. It says, "As previously indicated, applicant's construction is advantageous wherein the lower peripheral edge of the hold-down member is maintained out of contacting relationship with the cap on the container to not only assure a tight seal between shoulder 50 and rib or segment 56, but also to prevent the cap from tending to dislodge retainer 18 from extension 22 of barrel 24 during assembly of the unit or upon replacement of cap 40."

Here they come back to the idea that this gap between [542] the lower margin of the retainer cap, of the hold-down cap and the retainer ring is emphasized as the basis of novelty over the prior art brought about by a seal at the top that stops the downward movement.

Then he goes on with respect to Claim 26, which is a dependent claim, which is not involved here, as I understand it.

So there we come to a situation where this file history reveals an effort to get broadly an overcap as a hold-down member seated on a retainer. Lohse denied that possibility. There was another effort to get it on a reargument. Then there was an effort to get it on the theory that Lohse had his seal down below the threads that connected the two members and then came Mellon, and Mellon showed the seal, but on the contention that neither Lohse nor Mellon showed that clearance between the lower margin of the overcap and the container cap to provide for this first feature of preventing the retainer from being displaced as described in the specification, and the second feature that came into the case later of effecting a better seal between the shoulder and the rib, in other words, a pressure seal which I think was characterized by Mr. Fishleigh as a better seal than the seal that is just face to face. Now, that is where it came to, with the entire novelty being predicated upon [543] what I have stated. Now then we come to another situation where even that is final.

Q. I think you want to refer to the Livingstone patent. A. Yes, I have it in mind.

Q. By the way, Mr. Kingsland, I believe you were here when Mr. Scoggin gave his definition of an integrated sprayer or integrated container. A. I heard the phrase.

Q. Do you call this Mellon and Lohse an integrated sprayer? A. Well, it would be integrated in the same sense that this one could be perhaps, but I don't see that we are down to a question of integrated sprayer. I want to emphasize that and before I go to this other, and that is this—well, I will take it up when I consider the claim. What I have in mind is that, backing away from combination claims and coming to this type of claim, and then claiming it as a closure assembly, we are down now to a situation where I don't see any possibility of integration of any type being of any significance.

Q. Well, I think Mr. Scoggin's definition was more in a commercial sense than in a patent sense. A. Possibly so.

Q. While we still have this Mellon disclosure in front of [544] us, I would like to point out that the shoulder 31 is described in column 3, line 20, as an annular shoulder on the cap? A. Yes.

Q. Described in the specification? A. Yes, and that it is a shoulder fitting against a gasket.

[545] Q. Do you have, Mr. Kingsland, Plaintiff's Exhibits H and I, which are the Livingstone patents? A. The Livingstone patents?

Q. Yes. A. I have them both here.

The Court: As I understand, this patent was not before the examiner at the time this application was heard.

Mr. Conrad: That is correct, your Honor.

Q. (By Mr. Conrad) Mr. Kingsland, for your possible use I have taken the plunger out of Exhibit G, which puts it in the condition in which we will photograph it and enter it in evidence as G-1. A. Well, we have—are you ready for me to go ahead?

Q. Yes, sir. A. We have in this Livingstone patent, the '480 patent which was filed March 9, 1953—we have an overcap which fits over a retainer in this particular

view in which there is the channel in the overcap at a place corresponding to the shoulder in the Scoggin patent, and we have on the retainer itself an extension, the top of which impinges against two sides of the "V" shaped channel in the overcap. We have clearance so that when the overcap comes down we have a tight seal at this point, this 38 and 39, forming the seal, and [546] it is a press-tight seal, because it comes up, the tongue comes up and fits into this "V" shaped channel, and it is a press-tight seal of the same type of the Scoggin secondary seal, that is the seal between the corner of the shoulder and the "V" shaped underlying rib in the Scoggin patent.

Q. Well, that is the seal— A. So we have—so far as the sealing arrangement is concerned, we have the identity of structure there, and when we come to look at the claim we will find that the claim can be read on this structure just as well as it can be read on Scoggin, because, my position is—and I think it is justified by the position that was taken by the Patent Office—that Scoggin now is down to claiming a closure assembly, and as I understood from Mr. Fishleigh, and I believe the statement of counsel at noon today, that so far as the pump itself and pump elements, they are not to be considered, and that would be the only way in which these claims could be legitimately read because of the limitation down to the closure assembly, which closure assembly of Livingstone, to my mind, is a full equivalent of the closure assembly of the Scoggin patent.

* * *

[548] Q. Colonel Kingsland, I think the difficulty, if any, would be that it strikes one as sort of incredible that the great United States Patent Office would issue somebody a patent on the basis that they had made the cap skirt short enough so it didn't strike something before the seal was tightened. A. Well, of course, sometimes those cases happen. I have seen it happen where there is an interview with the examiner, and the examiner says, "Well, I don't see much in it, but I haven't a direct reference," and it seemed perhaps that that was where this examiner was, but I think that if the examiner had had Lohse, or either one of them where there is clearance and

where clearance is taught, that undoubtedly it was not allowable. [549] That is my considered opinion about it. It never would have been allowed if Lohse had been available.

Q. Excuse me. You said Lohse; you mean Livingstone? A. Livingstone, Livingstone. I want a correction on that. It is Livingstone I'm thinking of.

* * *

[575] Cross-Examination by Mr. Schmidt.

Q. Mr. Kingsland, at the outset there were one or two statements that you made that I feel certain you did not intend to make and perhaps you would like to have it straightened out. Do you have the Lohse patent before you, a copy of the Lohse patent? A. Yes, I have it here, Mr. Schmidt.

Q. I understood you to say on direct yesterday that Lohse seals between an overcap and a retainer or collar. Did you intend to say that? A. Well, if I said it I overspoke on that, because I do know where Lohse seals. Lohse seals between the upper edge of the—let me look at it to be sure. In Lohse we have a gasket 3, and the cover cap comes down, and the edge, the lower margin of it, contacts the gasket, and the seal is formed at that place. It is below the threads on the interengaging threads on the overcap and what is equivalent to the retainer. That is the place of seal. If I said anything different from that—

Q. I'm not sure I— A. I have not stated the fact from the drawing.

Q. I am not sure I understand you. Are you saying the cap 12 [576] of Lohse seals on the gasket 3? A. There is a seal there.

Q. Yes. And that seal 3 is in turn compressed tightly against the top of the container cap 1? A. That is correct, yes.

Q. And that is not— A. There is another seal, of course, below the retainer cap, which is the normal seal on the container cap seal.

Q. Yes, within the cap. A. Yes.

Q. But you do not mean to say that that is using the cover cap to seal on the collar or on the retainer or on the plug 4? A. No. The seal is against the gasket 3, and the lower margin of the overcap, and that is below the threads that interengage when the overcap comes on the retainer.

Q. Yes. Thank you. A. That was the distinction that was attempted to be argued from the claims that I referred to in the file history.

Q. Now, at the outset of your direct testimony, it was my understanding that insofar as the SS-40 accused device is concerned, that you were going to rely insofar as your opinions were concerned, upon information that had been furnished to you and upon what you had heard from Mr. Corsette. Do you recall that? [577] A. That is correct. I was told—of course, in advance I had had a description of the accused structure as actually marketed.

Q. Now, did you, at any time during the year period that you had up until the date of this trial, obtain any independent information for yourself as to the nature of the accused structure? A. No, I can't say that I did, except as it was told to me. I did examine the commercial structure from time to time.

Q. The Plaintiff's commercial structure? A. In other words, when I got the information it was demonstrated to me with a physical structure as far as I could see it in these small—in these small dimensions.

Q. Yes. And they are rather tiny, are they not? A. Yes.

Q. So far as the human eye can detect? A. Yes.

Q. Now, was that the full extent of the information that you had prior to the trial? A. It is. And I gave a resume of how I understood it this morning.

Q. Yes. Now, does that mean that your opinions are therefore for the most part based upon the interpretation that has been placed upon the nature of the accused structure by Mr. Corsette? [578] A. That's a fair statement.

Q. Did you, prior to trial, have an opportunity to look at the X-ray that was brought into evidence by Plaintiff? A. I looked at them, but, Mr. Schmidt, I am not an X-

ray expert. I am frank to say that my eyesight is not quite as good to see the things that others that know something about it can see.

Q. You were not able to detect anything— A. I happen to have a doctor son who takes X-rays, and he tried to explain them to me, but I gave up.

Q. You were not able to determine anything of value from those X-rays? A. No. I wouldn't attempt to.

Q. In preparing yourself for testifying, did you take into consideration the Cooprider-Corsette patent? A. Mr. Schmidt, I had too much to do. I think I have read that patent but not critically. I was told rather early that the commercial structure was different, and my problem was to compare it with the commercial structure and therefore I didn't clutter my mind with trying to go through the details of that Cooprider patent.

Q. Well, now, you testified at rather great length as to what happened during the prosecution of the patent in suit, and you pointed out what is said in the patent with respect to objections and how those objections related [579] themselves to the prosecution and to the claims that were ultimately allowed. I hand you Defendant's Exhibit 122, which is a file history of the Cooprider-Corsette patent. I appreciate that you have not had an opportunity to study it, but with your long skill and experience I'm sure it won't take long— A. As a matter of fact, I don't think I even looked at this. I did look at the patent.

Q. Very well. A. I was trying to use economy of time, and I just figured it wasn't material and so I didn't bother with it.

Q. But you didn't know whether it was material without having looked at it, did you? A. Beg pardon.

Q. You could not tell whether or not it was material until you looked at it? A. Well, I think you misunderstood me. What I considered was that whatever that patent described, it was not what I was comparing, because I had been told in the beginning that the commercial structure was different, and therefore I gave my attention to trying to get the details of the commercial structure, because the comparison that I was making was the normal com-

parison with the commercial structure and not with some patented disclosure.

* * *

[592] Q. (By Mr. Schmidt) Let's turn to the prior art and I ask you among the references which you discussed and applied, which is your best reference? A. I don't think a best reference can be selected. I think in order perhaps Lohse on the general overall is good, I think Mellon is good, and I certainly think that the Livingstone patents are both good. Other features are shown in some of these other references. This idea of selecting the best reference is only a matter of saying that one of them directly anticipates. If I would say the question of invention, lack of invention, rather than the technical anticipation, I think I would argue it on Lohse plus the Livingstone.

Q. Do you find any full and direct anticipation in any of the prior art? A. The only way that I was able to conclude whether or not there was direct anticipation was to assume a very broad reading of the claim so that it would encompass the accused structure as I then understood it and as I now understand it, in which event the breadth that would have to be given to those claims would be met by either the [593] Livingstone patents or Lohse and one or both of the Mellons.

Q. Let's take Claim 1 now. Is Claim 1 fully anticipated by Lohse? A. With a narrow reading, no.

Q. Do you read it narrowly? A. It has to be read narrowly as I see it because of the limitations that were put in there for the purpose of getting away from references that were almost dead ringers.

Q. It has to be read more narrowly than the original claim? A. In a broad sense.

Q. More narrowly than the original claims that were in the case? A. I think the proper interpretation of Claim 1 is directly met in the Livingstone patents because it is a closure assembly and I think that Livingstone's come closer because they do have the conical surfaces as one of the meeting surfaces that is engaged to form the seal.

Q. Can you take Claim 1 word for word and element for element upon Livingstone or either of the Livingstones? A. Yes, I believe I could. I didn't try it exactly because I didn't think that was a material matter. I don't see—I tell you frankly, I don't see any difference treated as a closure assembly in the relationship between the Scoggin patent on which that claim is [594] predicated and the relationship in the Livingstone patent.

Q. And you are saying that Livingstone is a full and direct anticipation of every element of the Claim 1? A. I would say of the novelty. I consider that claim under the Jepson Rule. I am talking out of all of the components of the pump per se and treating it as a closure assembly, as such, I believe I can read it word for word on the Livingstone patent. I didn't try the experiment frankly, because I thought that it wouldn't make much difference. It certainly lacked novelty under that rule in my opinion.

Q. You are saying if you take enough out of Claim 1, you can read Livingstone? A. Well, I can try it. Do you want me to try it here?

Q. Well, let me ask you first, what is Claim 1? Is it not a combination claim? A. Is it a combination?

Q. Yes. A. You are asking me whether it is a combination claim?

Q. Is it not a combination claim? A. Is it not—it is a Jepson claim.

The Court: What do you mean by that, Colonel?

A. I mean that—oh, you mean by the "Jepson"?

The Court: Yes. What do you mean, "Jepson"?

A. That is a well recognized decision of the Patent Office [595] which the Patent Office follows, and I think I tried to explain it this morning, it means in that type of claim we set up all old elements in what has been referred to here as the introduction. That is set apart as not constituting any novelty in the claimed subject matter, and then you go to what the applicant considers the claim subject which permits an interpretation of the Jepson claim which is referred to as such by the applicant here; you read all structure that is within the introduction as being old, conceded to be old by the form of the claim, and that is the situation we have here.

Now, when Mr. Schmidt asked me if I could read it, I would have to read it, of course, reading out those components which are in the category of old elements as represented to the Patent Office by that form of claim.

[596] Q. That means that you would have to wholly disregard that part of the claim that says, "The combination with said spray unit"? A. That is, as I tried to explain this morning, is the dividing line, but I think that this claim as framed didn't divide at the right place, because it indicates to the Patent Office that at that stage there was novelty in the retainer, which wasn't true. A retainer with the—even with the screw threads on it, was old.

Q. What the retainer— A. So that should have been put in the introduction that we have referred to and that Mr. Fishleigh referred to.

Q. Was the retainer— A. I think we all understand what the effect of a Jepson claim is.

Q. Was the retainer old in its entirety? A. Beg your pardon?

Q. Was the retainer old in its entirety? A. The retainer was old. The retainer certainly was old in its exact position and with the screw threads in Lohse. I think we demonstrated that here yesterday.

Q. In its entirety? A. The retainer was old. It was also old in the pumps that preceded it. Those didn't have the screw threads on them, but Lohse certainly had it. So in drafting that claim, [597] my position would be that if you are going to draft it in the Jepson form for a proper representation to an examiner in the Patent Office, that should have been put before "The combination with," because the fact is that that is where it belongs.

Q. Now, it is your position that the words "The combination with the spray unit" are to be looked upon as meaningless and we are not to say that the latter part of the claim is to be considered in combination with the first portion of the claim? A. That type of claim presents to the Patent Office what the applicant considers as novelty. Now, I say "The combination with" is the form that we use in those Jepson claims and in the prosecution of the case. The attorney called attention to the fact,

which means that the attorney was representing to the Patent Office everything that is in the introduction here is old subject matter, "and what I am now claiming is a closure assembly only."

Q. I appreciate what you say, Colonel, but I don't believe you have answered my question as to whether or not you are saying that this Court shall now wholly disregard everything down to the words "The combination with" as if the first part of the claim were not even there. A. It is not in as a predicate for novelty, not in for a predicate of novelty.

[598] Q. I repeat my question. Shall this Court wholly disregard all of the words prior to "The combination with"? A. Yes, in my judgment.

Q. In spite of the fact that the claim says that all of the material below that is in combination with the elements ahead of that? A. Disregard it in ascertaining whether there is novelty in the claim, because novelty has to be found, under the practice of the Jepson form of claim, has to be found in that part of the claim that is not environment and not introduction. There is a very curious thing about it, if you want to find infringement of a claim, they read in those elements as a part of the claim that has to be found, to find infringement, but they don't consider them from the point of novelty. There is a very distinct difference between considering a Jepson claim as a matter of novelty and as a matter of infringement. I think you know that, Mr. Schmidt.

Q. Isn't that somewhat anomalous? A. I think we all know that, and we were all somewhat puzzled in the early beginning as to what they meant by Jepson.

Q. It is puzzling. A. That is the way I interpret it.

* * *

[599] Mr. Conrad: There is only one thing I would like in the record, your Honor, and I understand Mr. Schmidt is in agreement with this, that is that the commercial production of the SS-40 was made prior to the grant of the Scoggin patent in suit.

Mr. Schmidt: Yes, we understand that to be true.

* * *

[600] Mr. Conrad: Your Honor, I would like to offer in evidence as Plaintiff's Exhibit WW a type of bottle that was used with the closure Exhibit AA, which has already been stipulated.

The Court: Very well. Admitted in evidence. (Plaintiff's Exhibit WW marked for identification and received in evidence.)

Mr. Conrad: I would like to offer as Plaintiff's Exhibit XX the deposition of Anthony J. Ratichek, taken November 20, 1961. There are some passages in there about the use of some of these elements, physical exhibits, we have already put in.

Mr. Schmidt: No objections, your Honor.

The Court: Admitted without objection.

(Plaintiff's Exhibit XX marked for identification and received in evidence.)

Mr. Conrad: And I would like to offer the following portions of the Deposition of Baxter I. Scoggin. Your Honor, I thought what I would do would be ask the reporter to write into the record these excerpts, because they are fairly short and the depositions are rather lengthy. In the April 12, 1960 deposition, page 214, lines 3-19. Now, that, by the way, is a portion of the deposition where Mr. Schmidt [601] tells us what prior art patents were found in the search made before the Scoggin application was filed, and there is apparently an error in the deposition. The last patent mentioned—mentioned in the deposition is 2,587,687, whereas I think we are in agreement that it should be this Mellon patent, 2,586,687.

Mr. Schmidt: I shall be happy to check on that. Yes.

Mr. Conrad: Thank you. I also offer the deposition of Mr. Scoggin, November 17, 1959, page 93, line 20, through page 98, line 2. I would like to point out to the Court, and I think there will be agreement with this from Mr. Schmidt, that in page 97, line 13, the words "operated in" should be "occupies".

I also offer, your Honor, from the same Scoggin deposition, page 47, line 1, through page 52, line 10. Also offer page 125, line 13, through page 127, line 10.

(Which said pages, in the April 12, 1960 deposition of Baxter I. Scoggin, page 214, lines 3-19, November 17, 1959 deposition, page 93, line 20, through page 98, line 3, and also November 17, 1959 deposition, page 47, line 1, through page 52, line 10 and also page 125, line 14, through page 127, line 10, so offered in evidence are in words and figures as follows:)

* * *

[602] Mr. Cole: All right.

I would like to read into the record at this time a list of the numbers of the patents which were located in a preliminary search made on behalf of Cook or Bakan prior to the decision to prepare the Scoggin application.

You gave me this list, didn't you?

Mr. Schmidt: That's the list I gave you the last time?

Mr. Cole: That's right.

Mr. Schmidt: Very well.

Mr. Cole: If you will, just copy these numbers in, please.

(The numbers are as follows: 1,679,305; 2,083,058; 2,096,042; 2,119,884; 2,301,051; 2,568,057; 2,586,687.)

* * *

[603] Q. Mr. Scoggin, if you had no clearance so that when you threaded your cap all the way down the plunger was really in its lowermost position, it's conceivable that you could limit the amount of pressure that you applied to your seal, is it not? I'm talking about the overcap seal. [604] A. That's right. That's the reason I say it will be fairly close, maybe a thirty-second or something like that.

Q. I have found it now. Here is a sectioned Bakan shipper sprayer, and the plunger has been sectioned, too. Now, the cap is screwed down on the retainer. The plunger is in place, and I ask you to note that there is, perhaps, a sixteenth of an inch clearance, that is to say, the plunger with the cap all the way down moves back and forth about a sixteenth of an inch, right? A. Something like that, yes.

Mr. Cole: I ask that this be marked Exhibit 26.

(Thereupon a sprayer was marked for identification by the reporter as Scoggin Exhibit No. 26.)

Mr. Cole: In order that we may let the record show a little more clearly what we're talking about as we discuss this Calmar shipper sprayer, I ask that the reporter mark as Scoggin Exhibit 27 a print headed "Calmar's SS-40 Shipper Sprayer, General Specifications".

(Thereupon a print was marked for identification by the reporter as Scoggin [605] Exhibit No. 27.)

Q. (By Mr. Cole) Will you look at this, Mr. Scoggin. We have just discussed the provision for preventing leakage past the plunger and through the retainer. The plunger in this sketch has been marked "K" to correspond to the plunger in Exhibit 16. I have tried to follow the same marking on through, so that there will be no confusion with this Exhibit 16. The retainer is marked here "G", as in this Exhibit 16. Now, there is a part unmarked, an annular member depending from the spray head, "L", which has a conical circumference at its lower end, and as the plunger is moved down to its lower position, that seats between the plunger, "K" and the collar, "G", and blocks the drainage of fluid past the plunger, is that right? A. I'd say it could.

Q. Well, I can assure you it does. A. Sometimes it doesn't.

Q. Let's put it this way, it tends to seal at that point? A. Yes, sometimes it does.

Q. You understand this is not an advertisement you're putting out here. And you are familiar, no doubt, with the fact that, as the plunger comes down, there is a probe carried at its lower end, which I am going to [606] mark here "M" as in "Mother", which engages a ball valve, "M", to hold the ball valve on its seat, is that right? A. What is right, now?

Q. You are familiar with the fact— A. (Interrupting) Yes—

Q. (Continuing) —that there is a probe carried by the plunger? A. Yes.

Q. Which, when the plunger is depressed, holds the ball valve on its seat, and resists drainage of liquid past the ball valve? A. Yes.

Q. And, also, the ball closes the probe itself, which is part of the passage running up through the plunger, so that there is another seal there, this probe being soft, of course, you're familiar with that? A. Yes.

Q. So that drainage of liquid up through the normal passage, through the plunger, is resisted by this seal at the ball at the lower end? A. That's right.

Q. And drainage of liquid which flows past the plunger and upwardly into the cap is resisted by this circumferential, by this annular, flange at the lower end of the sprayer head, is that right? [607] A. Yes.

Q. Due to the wedging action as the sprayer head is driven down, correct? A. Yes.

Q. So that it is essential in Calmar's sprayer, in order that these additional blocks to the passage of liquid out of the sprayer proper and into the overcap, be prevented, is that right? A. What did you say?

Q. I said that these seals which have been provided to block the flow of liquid through the inside of the plunger and around the outside of the plunger are effective only when the plunger occupies its lowermost position, right? A. Right.

Q. It has to be forced down? A. (Nodded yes.)

Q. Whereas if your plunger is forced down so that it reaches its lowermost limit, you may not apply pressure at the cap-to-collar seal, is that correct? A. Might not, yes.

Q. You have said that your current Bakan sprayer has no means to prevent leakage into the cap. Is the same true of the sprayer disclosed in your patent in suit? A. Correct.

[608] Q. There is no means to prevent leakage into the cap? A. Correct.

* * *

[609] Q. (By Mr. Cole) Now, I'm returning to you these Exhibits 17 and 18, 17 being the Bakan sprayer and 18

being the Calmar sprayer. These two sprayers, Exhibits 17 and 18, can be disassembled, and I wish you would remove the heads, if you will, and see whether they are interchangeable so that you can put the head of the Bakan sprayer on the Calmar sprayer, and the head of the Calmar sprayer on the Bakan sprayer. A. They're close.

Q. Now, will you remove the plungers. If you have difficulty in getting these back together, I'm sure Mr. Corsette can get them back. Perhaps you'd like to try the plungers in the two barrels. A. They seem to be quite similar.

Q. In other words, the dimensions are essentially the same, taking into consideration the fact that there has to be some allowance for differences in shrinkage in the process of casting? A. That's right, they seem to be very similar.

Q. What differences are there between the two sprayers, now that you have them apart, which would account for the difference in the volume of material discharged on a given stroke? I think you mentioned that a few minutes ago. A. Let me see if I can demonstrate it here. You [610] see the difference in the length that's exposed above the collar?

Q. Yes. A. That gives this (indicating) one a longer —wait a minute, I've got the wrong part in the wrong one here. There's a difference in the way the collar is constructed. We have a longer stroke.

Q. Well, how would the difference in the collar achieve that? A. Well, where they come back to, and the length, the distance that your head comes down on the plunger, and a lot of other things.

Q. There's no essential difference in the length of the plunger, is there? A. No, but there's a difference in the way it fits. See, this one goes all the way down to the collar and the other one doesn't. The head is different, too.

Q. That's the Calmar sprayer that doesn't—in which the head doesn't—move down into engagement with the collar? A. You can see the difference (indicating).

Q. In other words, there is a difference in length in there somewhere? A. Somewhere. See, there's a difference there (indicating).

Q. Yes. It looks as though the plunger in the [611] Bakan sprayer were made a bit longer, doesn't it? A. It looks that way.

Q. Would you mind taking those apart again and— A. (Interrupting) They weren't when we took them apart, but I agreed with you that it looks that way.

Q. Well, perhaps if you took them apart again you could tell what the difference is from the plunger. A. There's no difference in the plunger.

Q. The plungers are the same? A. Right.

Q. There's a shoulder on there perhaps that limits the movement of the plunger, is that correct, an enlarged portion or something of that kind? A. You have something else in this collar.

Q. Oh, I see. You're pointing to the inner annular flange on the Calmar collar? A. Yes.

Q. Which embraces the plunger, in which the plunger fits snugly. And you do not have that inner collar in the Bakan product? A. No.

Q. On the other hand, you have lost the guiding effect of the inner collar, have you not? A. Well, if we had something—I mean I don't [612] know whether you'd say we lost it or we just didn't respect it in the first place.

Q. Will you try interchanging the pistons, which are the flexible, the small flexible, members at the lower ends of the plungers, to see whether the Calmer piston will fit in the Bakan plunger and so on?

Mr. Scoggin, excuse me, did you answer the last question?

A. They are a little different in construction, but they —the plungers seem to be almost identical in some of the dimensions.

Q. In other words, the piston of the one unit can be inserted in the plunger on the other unit? A. Yes.

Q. In view of these similarities of dimensions of the Calmar and the Bakan sprayers, have you any explanation

as to how that occurred? A. Well, I don't know what explanation is necessary. I mean there's no—

Q. (Interrupting) Surely, Mr. Scoggin, it wasn't purely an accident that these parts are interchangeable. A. Probably not.

[613] Q. And you have no explanation? A. I don't remember why we had made them—let me see this (indicating).

Mr. Conrad: What are you looking for, Mr. Scoggin?

The Witness: One of these here (indicating). This one—

Mr. Schmidt (interrupting): Refer to it by exhibit number.

Q. (By Mr. Cole) Which exhibit is that? A. Exhibit 4. There's a difference in this plunger and the one you submitted.

Q. In what respect? A. There's a difference in dimension.

Q. Which dimension is that that's different? A. There's a difference in the over-all length and there's a difference in the length down to the portion here (indicating).

Mr. Cole: The witness is pointing to what appears to be a shoulder formed between two portions of the plunger of different diameter.

Q. (By Mr. Cole) The plunger, which you have taken from sprayer 4, fits within the barrel, does it not, of the Calmar sprayer? [614] A. I think so, yes.

Q. So that here again we have the interchangeability of the parts and the substantial identity of dimensions of the Bakan and the Calmar sprayers.

Could we perhaps offer as a reason for this similarity of dimensions that Bakan found it convenient to use the dimensions which had been employed by Calmar over the years? A. Well, that might be it. I don't remember why. Of course, Cook wanted something similar to Calmar.

* * *

[615] Q. (By Mr. Cole) At the time your application was filed, Mr. Scoggin, were you aware of the fact that

overcaps or hold-down caps had been proposed for use on sprayers by others than yourself prior to your invention? A. No.

Q. You weren't acquainted with that? A. Not of the type we have.

Q. You are aware of it now, I take it? A. Well, maybe I misunderstood your question there. There were some other types of sprayers where there had been overcaps before but not the type that we [616] have.

Q. Do you mean that overcaps had not been applied to the type of sprayer which had been made by Bakan up to this time, right? A. And were not attached to the retainer, the same kind of retainer as we have here.

Q. Simply because the same kind of retainers had not been used before? A. Well, they had a different structure to what we have here.

Q. The barrel, as I would call it, was down at the bottom of the container and didn't extend up through a closure cap, I mean the container cap, is that correct? A. There was a basic difference between the type of product.

Q. But the type of product to which you applied your cap was the type which had been sold you for many years by Calmar and Marmac, was it not? A. It was similar to that.

Q. It had the collar above the container cap? A. This one has a different type of collar, a collar with screw threads and there was no collar with screw threads on Marmac's or Calmar's.

Q. In other words, you applied your cap to a [617] different kind of pump, is that right? A. Well, to a different kind of retainer.

Q. I think you have already told me that your retainer in your patent performs the same function in holding the container cap in place as does the retainer of the earlier Bakan sprayer? A. That is correct, but it didn't—

Q. (Interrupting) And of the earlier Calmar sprayers? A. That's correct, but they did not have threads.

* * *

[619] Mr. Conrad: Now, your Honor, I offer in evidence all of the exhibits which we previously marked, which are A through YY.

Mr. Schmidt: No objection, your Honor.

The Court: All admitted in evidence.

* * *

[623] Q. I hand you what has been marked as Defendant's Exhibit 124. Will you explain what that is. A. Well, that is a few of the type caps that sprayers are mounted on.

Q. By whom? A. By Cook Chemical.

Q. Are you speaking of cover caps or container caps? A. These are container caps on which the sprayer is mounted.

Q. Now, why do you use so many different types of container caps? A. Well, from the standpoint of Cook Chemical alone, we have a number of different packagings. Some of them are cans, some are bottles, and so forth. From the standpoint of other customers, every customer has some favorite type of cap that he desires the sprayer be mounted on.

Q. What is the significance of that in so far as your business is concerned? A. Well, so far as the—you mean the Scoggin patent?

Q. No, so far as your operations are concerned, what [624] difference does it make that you have so many different types of caps? A. Well, we have to have a sprayer that can be mounted on any type of cap. We have to have flexibility, and so we—

Q. You mean to say that you have to have one sprayer that is universally adapted for use with every one of those caps? A. Yes, sir.

Q. Now, what are the characteristics of the caps that differ one from another? A. Well, first you have metal, and then you have plastic, and almost all the metal caps, as you can see here, are very thin metal, practically as thin and flexible as this glass (indicating), and then the plastic caps are thicker. Some of them have thicker tops where

the sprayer, the extension from the barrel of the sprayer, has to extend up through. Some of these plastic caps are thin at the top, some are thick. Also, the surface of these caps varies. Some of them have a scallop on there, and some of them have rounding, and you can see from the cross-sections that they are not too uniform.

Q. What is the significance of that, in so far as you are concerned, in coming up with your invention covering the cover cap assembly, overcap assembly? [625] A. Well, with the overcap these wide variations in the container cap is the main reason, one of the principal reasons, that it is impossible to plan to seal on an overcap against a container cap. There are too many variations in the tops of the container caps, so you have to plan to seal someplace besides the top of the container cap.

Q. Are you saying that it would have been impossible for you to have brought the cover cap down into engagement with the container cap and effected a seal? A. Well, I wouldn't say anything is impossible, but we tried this and we had very bad luck. I think Exhibit 9 in my deposition—could we have that? It's 7 or 9. It might be 7—7 or 9. It's a cap.

Q. Is that the one you had in mind? A. No, those were some of the earlier ones we tried. It's a white, clear polyethylene cap, square cornered.

The Court: Gentlemen, of what is this testimony in rebuttal?

Mr. Schmidt: This relates to the reason why Mr. Scoggin was forced to move away from the ideas of the prior art as to how to establish a seal. For example, in Lohse we have sealing on the cover cap. In Mellon we have an attempt to use the cover cap on the container itself.
[626] A. This particular cap here—of course, it has been placed on a sample and I shipped it around the country. There was a number of these, several cases of the material shipped to get full shipping conditions, and this particular cap had a little ridge on the inside of this cap, and there was an attempt—you can see how this cap, which was once cylindrical, has been spread at the bottom. There was an attempt to seal that way on top of a container cap,

a metal container cap. We thought at first we weren't putting enough pressure, maybe we could get it, but this one shows the distortion after we put enough pressure, all the pressure we could, to seal on the top cap. And nevertheless, it still would leak. Primarily one of the reasons that this—we found that one of the reasons that this is almost always true, particularly with metal caps, is when you screw the metal cap down against the bottle the metal is thin, particularly after you take the—cut the center of it out to put the sprayer in, it's real thin, and it distorts so much that you can't seal on it. Likewise, with plastic caps we have variations inside so that the surfaces can't always be parallel. They will be off and couldn't be sealed on.

(Defendant's Exhibit 210 marked for identification.)

[627] Mr. Schmidt: I offer in evidence Defendant's Exhibit 124, and I have marked Scoggin deposition Number 9 as Defendant's Exhibit 210, and I offer it in evidence.

The Court: Very well. Admitted in evidence.

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[628] CLARENCE T. FISHLEIGH,

recalled as a witness on behalf of the defendant in rebuttal, testified as follows:

Direct Examination by Mr. Schmidt.

Q. Mr. Fishleigh, you recall the Court's inquiry this morning with respect to the significance of the space between the overcap and the cover cap in the Scoggin patent, do you not? A. Yes, sir.

Q. Now, in the record at page 474, in the direct testimony of Colonel Kingsland, at line 14, reference is made by the Colonel to page 18 of the file history of the patent in suit. Do you have that exhibit? A. Yes, I have that here.

Q. Colonel Kingsland points out that "it is simply a restatement of the Patent Office's idea that Lohse met

broadly the original claims and the claims as modified [629] and narrowed up to this point. I don't find much significance in this particular action because as a result the claim, the two claims were cancelled in the next action on page 19 of the record."

Additionally, on page 486 of the record, counsel said this to Colonel Kingsland: "Colonel Kingsland, I think the difficulty, if any, would be that it strikes one as sort of incredible that the great United States Patent Office would issue somebody a patent on the basis that they had made the cap skirt short enough so it didn't strike something before the seal was tightened." Colonel Kingsland responded on line 18: "Well, of course, sometimes those cases happen. I have seen it happen where there is an interview with the examiner, and the examiner says, 'Well, I don't see much in it, but I haven't a direct reference,'" Now, do you agree with the conclusion that the Patent Office had no direct reference relating to this matter of the space? A. No, I do not. In fact, I was quite surprised that in going through the file wrapper that no mention was made other than just a passing one to the fact that there was a Slade reference 2,844,290, and a Nilson reference, 2,118,222, because particularly in view of the emphasis that has been placed on the Livingstone patents here in this court, I think it is of more than passing [630] significance that the Examiner had before him at the time of this paper No. 5 rather early in the prosecution two patents which in my judgment show exactly the thing which has been emphasized here for Livingstone and which make Livingstone merely cumulative instead of being something that was of tremendous importance as covering a subject which had not been before the Examiner.

Referring to the Slade Patent 2,844,290, in Figure 2 there is shown a plastic pouring spout marked generally as 16, and I call attention to the fact that in Livingstone the basic structure that was being worked with was a pouring spout.

Q. In other words, you are pointing out that this Livingstone, as well as in Slade, as cited by the Patent Office, we are dealing with a plastic pouring spout and

the cover for such a pouring spout? A. Yes, the coincidence that in both of the patents the basic structure happened to be a pouring spout.

Q. Now, does the citation of the Livingstone patents in this litigation add anything to the record with respect to the idea of utilizing a space or having a space between the cover cap and the container cup? A. No. As I was about to point out, there is in Slade a collar cap marked generally as 17, having internal screw threads which are threaded upon the external [631] screw spreader on the spout 16, a seal is formed between that cover cap through a gasket in the top of the pouring spout and as clearly shown in Figure 2, there is a space below that cover cap so that there would be no interference with the action of the cover cap coming down to form its seal. To that extent it is my judgment that that is merely cumulative or I could use Mr. Corsette's term of redundant and in this instance use it precisely in its common meaning; that is something that is merely a repetition of what was already there.

Q. Now, you are speaking of the Livingstone patent as being redundant? A. Yes, in view of the fact that the Examiner at this early stage had Slade before him.

Q. Now, in view of that, what is your conclusion with respect to the question of whether or not the Examiner did or did not allow the claims here in issue on the basis that they were novel because of providing a space between the cover cap and the container cap? A. Well, I don't believe that was yet, that no doubt is certainly one of the features which was added and which, of course, has to be considered, but it is equally inconceivable to me that the Patent Office would have granted a patent on that one feature itself, but instead [632] of assuming that the Patent Office was completely wrong in so doing, I think it is much more sensible to look at the entire structure and see that there was in this Scoggin device something far and away above the one single feature of the space below the cap, although that was an important feature to have there.

Q. Will you refer to page 18 of the file history of the patent here in suit and tell us whether you find anything therein contained which leads you to believe that the

Examiner did in fact consider the space between the two caps? A. Yes, about the middle of the page, the sentence begins, "To provide the Lohse device with a rib or stop surface on the retainer 4 to cooperate with an interengagement, a shoulder and surface on the inside of the cap to prevent the cap from seating on the container cap is a feature shown in the art as shown by Slade or Nilson."

Q. Then, contrary to the position taken by counsel, it would be incredible to believe that the Examiner allowed the claim because they differentiated over the prior art in the provision of the space, do you agree? A. That is my view of it, yes, sir.

Q. Let's go one step farther and look into this question of Livingstone showing a seal that is alleged to be a new showing so far as this record is concerned. What did the [633] patent have before it concerning seals? A. Well, particularly it had at that time the Darley Patent 1,447,712.

Q. Now, what is there in Darley that is significant from the standpoint of the Examiner as he prosecuted the patent in suit? A. Well, looking in Figure 2, it can be seen that in this device there is a cap member, an overcap member 26, which has a conical sealing surface on its inner upper surface and as the cap is screwed down upon the member 13, that conical surface comes in seating contact with an upper conical surface on that member 13 and thereby provides a sealing engagement. In other words, there are two conical surfaces which when brought together produce a seating seal.

Q. What is your conclusion with respect to the question of whether or not the Examiner determined the claims to be allowable because of a particular type of seal? A. I don't feel that that can be it any more than the matter of the space in and of itself. That was one factor of several which entered into the structure which was defined by the claim elements which were finally allowed.

Q. What is your conclusion with respect to the equivalency of the showing insofar as the sealing is concerned [634] when comparing Darley with Livingstone? A. Well, again I can say that as far as the sealing feature alone is concerned that in my opinion Livingstone is

merely redundant or cumulative in view of the art that was before the Examiner and cited in the file wrapper.

Q. So in all respects insofar as Livingstone is concerned and the features of Livingstone relied upon by the plaintiff, do you find that those features were before the Examiner in other art at the time the case was being prosecuted? A. Yes, I do.

Q. What do you have to say with respect to two additional references relied upon by the plaintiff, namely the British patent No. 737,210 and Hothersall No. 1,714,874? A. Well, looking at the British patent, 737,210, and comparing it with Darley, they appear to be strikingly similar, differing only in the particular angle at which the mechanical surface, conical sealing surfaces are placed.

Q. You are speaking of which patent? A. I was speaking of the British patent and referring then to that, of course, that sealing surface is shown at 10, on Figure 2 of the British patent, and it is merely a matter of the conical surface on the cap mating with a conical surface on the spout of the container in the same [635] general way but slightly different angle than shown in Darley, Figure 2.

Q. Have you drawn any conclusions with respect to the cumulative effect or the redundancy of the British patent and the Hothersall patent when it is kept in mind that Darley was before the Examiner? A. Well, yes, I have. I believe that, generally speaking, the British patent and Hothersall show nothing of importance beyond what was shown by Darley in regard to seating, although there is some difference in the detail of the two structures.

Q. There is one more prior patent relied upon by the plaintiff for a feature that was allegedly not considered by the Examiner and that is Mellon '839. Do you recall, Mr. Fishleigh, it was pointed out that Mellon '839 like Livingstone presents the idea of leaving the space? What is your conclusion as to the pertinency of Mellon in this litigation? A. Well, I don't see anything significant about Mellon in that regard beyond what was known to the Examiner in the Slade patent.

Q. Now, in final conclusion do you agree with the statement that had the Examiner had before him or in

the prosecution of the patent in suit the Livingstone patent or the Mellon patent '839, he would not have issued the claim [636] here in issue? A. I definitely disagree for I see that there is nothing of importance or significance added to the situation by the Livingstone patents that was not already added by Slade or the other prior art file wrapper references.

Q. And do you recall, Mr. Fishleigh, the statement made by Mr. Kingsland to the effect that the retainer of the Scoggin patent in suit was fully and clearly old in the prior art? A. I recall something of that sort.

Q. Do you agree with that conclusion? A. No, I do not.

Q. Will you outline the functions of the retainer of the Scoggin patent in suit, please? A. I have noted three particular functions of the retainer in the Scoggin patent. The first is that the retainer is a part of a support for the barrel and plunger of the sprayer. Second, that the retainer is the anchor for the hold-down cap, and, third, the retainer provides a sealing element against leakage. Now, I have made an analysis of those three functions of the retainer against the prior art relied on by the defendant, or by the plaintiff, rather, and the file wrapper references and I find nowhere is there any patent which provides all three of those functions in any given retainer.

[637] Q. The Court made inquiry also as to whether or not the invention of Scoggin was within a crowded art. What is your conclusion with respect to the question of whether or not the prior art which Scoggin fixed during the prosecution of his application was or was not crowded? A. Well, considering it purely in the light of the patent showing, there have been a number of patents shown here, so that patentwise one could perhaps say that it was a reasonably crowded art but considering it from the standpoint of the accomplishment of the device of the Scoggin patent and what it was useful for and what it has proven commercially successful in doing, from that standpoint I would say that it was not crowded art. It was a relatively broad gauge new accomplishment which, as the testimony here has indicated, was something that had been sought for a long time but without success.

Q. Would you say that the art was crowded insofar as submitting or presenting an answer or solution to the problem that has been brought before the Court during this litigation? A. I would say it was definitely not. There were a considerable number of instances of some of the elements which go to make up the Scoggin device, but nowhere the combination functioning in a way to produce the desirable result which has resulted in the millions of integrated [638] shipper-seller type spray which have been put out under the Scoggin patent.

Q. In view of your position that the Scoggin invention did in fact solve a problem within an art, having many suggestions incapable of solving the problem, will you answer the Court's inquiry concerning the question of whether or not the claims here in issue should be strictly construed? A. I don't believe they should by any means be construed strictly enough to be limited to the precise detail shown in the drawings and described in the specification of the Scoggin patent. That is a most unusual situation, one seldom sees that, and I don't believe that should be followed in this case by any manner of means.

Q. Now, on page 481 of the record again during the direct examination of Colonel Kingsland, the question came up as to whether or not Mellon and Lohse can be called an integrated sprayer, and in response Colonel Kingsland said, at line 16: "What I have in mind is that, backing away from combination claims and coming to this type of claim, and then claiming it as a closure assembly, we are down now to a situation where I don't see any possibility of integration of any type being of any significance." Do you agreed with that opinion? A. No, certainly not.

[639] Q. Have you studied the Scoggin disclosure and come to any conclusion as to what the Scoggin invention is? A. I have given some thought to it after hearing some of the testimony here and I have set down what in my opinion is the accomplishment of the Scoggin device. I have put it down in writing so that I could give it without the danger of inadvertently omitting any of the items which I had thought were important.

Q. It would be well for you to read that into the record, and the remarks that you have written down will be

an exhibit. A. "The Scoggin Invention. The first commercially successful, inexpensive integrated shipping closure pump unit which permitted automated assembly with a container of household insecticide or similar liquids to produce a practical, ready-to-use package which could be shipped without external leakage and which was so organized that the pump unit with its hold-down cap could be itself assembled and sealed and then later assembled and sealed on the container without breaking the first seal."

(Defendant's Exhibit 222 marked for identification.)

Mr. Schmidt: The statement which the witness has just read into evidence of the Scoggin invention has been marked as Defendant's Exhibit 222 and I offer it in evidence. Do you have any objection to the exhibit?

[640] Mr. Conrad: No, Mr. Schmidt.

The Court: Admitted without objection.

(Defendant's Exhibit 222 received in evidence.)

Q. (By Mr. Schmidt) Now, Mr. Fishleigh, you were in Court, were you not, during the testimony of Mr. Corsette with respect to his criticism of certain models and exhibits concerning which you testified in illustration of the SS-40, the accused device in suit? A. Yes, I was present and heard him.

Q. Do you agree that his criticism is well taken? A. No, I do not.

Q. What do you have now to illustrate insofar as exhibits are concerned that the photographs and the models, samples of the SS-40 clearly depict what the device is? A. Well, we had anticipated that when these models were first made that someone might criticize the models by theorizing as Mr. Corsette did. In fact, we had some curiosity about it ourselves, so to find out whether there was some distortion, we at that time ran an additional sample which I have here and which is marked as Defendant's Exhibit 212.

Mr. Conrad: Your Honor, I object to this. That is improper rebuttal.

The Court: Yes, it is, gentlemen. We are going to hold this strictly to rebuttal testimony. I am not going [641]

to get into any new exhibits unless they have some definite relevancy to what has already taken place.

Q. (By Mr. Schmidt) Mr. Fishleigh, with respect to the Corsette criticism concerning the photographs and models of the SS-40, what is your answer having to do with the fact that those pictures do not properly illustrate the shape, configuration and disposition of the cuts? A. That criticism is not well taken because the models do not reflect distortion and that particular point as to the positioning of the so-called sealing ring, that was determined before we ran the original tests and took the photographs and I have since, after hearing this testimony, run some measurements on other caps in a different way.

Mr. Conrad: Now, if your Honor please, I think the witness is going beyond the ruling. If he opens it up, naturally we want to cross examine. This is explanatory of material which was available to him on the direct testimony.

The Court: What I think, Mr. Conrad, he has a right to probably answer the testimony of Mr. Corsette in connection with the distortion. I do not want to go beyond that. I think he has a right to do that. Overruled.

Mr. Schmidt: May I have a ruling as to whether or [642] not he may testify as to what he knew prior to this direct testimony?

The Court: Only insofar as it indicates any impeachment of the testimony of the prior witness.

Mr. Schmidt: We are not going to go beyond that.

The Court: Any exclamation as he testified in the original testimony with respect to the testimony of Mr. Corsette. Go ahead.

A. Well, we knew when we presented them that they did not show distortions particularly insofar as the important point of the positioning of the sealing ring, and since have run other tests, made other measurements which substantiate the fact that the sealing ring on the cover cap and the ridge which we have marked 80 or, rather, the groove, shall I say, which is marked 88 on the drawing on Defendant's Exhibit 120 are not in fact parallel, do not have parallel cylindrical sides but are substantially as

shown in the four drawings at the bottom right of 120, differing therefrom in degree as would be expected from any number of samples from a given mold or different cavities in a given mold but not in kind, and as to the general theory of distortion, referring to the two caps that Mr. Corsette presented, he referred to the question of the similarity of a hoop. Now, with a hoop, depending on how it is made, as with [643] this cap, depending on how it is made, there are three possibilities when you cut out a section. One is that the structure will spread out and expand. The other is that it may contract, depending on how it has been made, and the other, the last one is that if there are no stresses which are relieved, the structure may remain precisely as it was, particularly if only part of them are here, and I call attention to the fact that in the models which Mr. Corsette presented, what happened was that when the quadrant was cut out, the balance of it contracted rather than expanded, and it is equally probable that that would have happened with one such as we have here in these models, so that I have rechecked, I satisfied myself before we presented them that they were accurate and I have rechecked further and stand on the position that by my own checking and measurements and testing of samples that these are representative of these samples.

Now, of course, if there are differences in their production, that is possible, but these were commercial structures that were shown. [644] Now, one further thing that I should like to point out, that if, in fact, the two parts came together with cylindrical surfaces mating, as was suggested, there would be no reason for any distortion of those surfaces or those parts in sealing. Only if they are at an angle and were pressed further would there be a tendency to take on any permanent distortion. And as a last check as to whether or not those surfaces are strictly cylindrical or whether they are as depicted in these four drawings, I have very carefully checked over samples to see what happens when you put them together without the screw threads, and I find that they do come together with a wedge action. One can feel it, in fact by just putting them together relatively lightly they will hold a considerable weight. So that by these four or five different approaches

they all prove consistent and all prove that these drawings and models are reasonably accurate.

Q. Now, only one more question along this line: What is your conclusion concerning the contention by Mr. Corsette that the lips or rings do not bottom in the grooves as between the cover cap and the collar? A. Well, Mr. Corsette, if I understood him correctly, agreed that at least the so-called feather ring or feather edge at the bottom of the part which we have numbered 90, bottoms, and whether or not we have a contact as shown in [645] stage 2 which provides a sealing engagement.

Q. Now, back to the prior art for a moment, Mr. Fishleigh. Have you prepared any chart or any representation of how you approached the prior art and how you analyzed it? A. Well, yes. I have made a study to determine whether or not the mechanical elements of the claims of the Scoggin patent find a response in the various prior art structures, and I have prepared a chart which indicates, by a series of yeses and noes what my conclusions in that regard are.

* * *

Q. (By Mr. Schmidt) Will you produce the chart, please?

(Defendant's Exhibit 224 marked for identification.)

Q. Mr. Fishleigh, I do not now want to go deeply into what you have illustrated. I think it speaks for itself. But will you just point out what it is and how you approached the matter? A. The left-hand side of the chart is a reproduction of the [646] claim block previously considered. Across the top I have set down in a number of columns, first, the prior art relied on, and that is a mistake because of the confusion of the declaratory judgment case. If I may change that and say, "relied on by plaintiff".

Q. Will you change all copies at a later time, please? A. Yes, I will.

Q. Thank you. A. The next group are file wrapper references, and then two which were set up as Others, I believe in the notice or somewhere before they came to me, and I have indicated opposite each element whether or not in my opinion that element finds a full and com-

plete response in the prior art structure named at the top of the column. The chart indicates that with the exception of the Cooprider patent, which was set up in there for some reason or other, although it does appear to be prior art, that there is no patent listed on that chart which provides a full response for all of the elements of the claims in suit.

Mr. Schmidt: I offer in evidence Defendant's Exhibit 224.

The Court: Admitted in evidence.

(Defendant's Exhibit 224 received in evidence.)

Q. (By Mr. Schmidt) Mr. Fishleigh, one last question. Have you read claim 1 of the file history of the [647] Cooprider-Corsette patent on the Bakan 2 device to determine whether or not it reads thereon? A. Yes, I have done that.

Q. And what is your conclusion? A. It does find a response for each of the mechanical elements there defined in the Bakan 2 structure.

Mr. Schmidt: No further questions.

Cross-Examination by Mr. Conrad.

Q. Mr. Fishleigh, did you tell me earlier that you were not registered to practice before the Patent Office? A. Well, I don't specifically recall whether I told you, but that is the fact.

Q. Did you also say you are not a practicing lawyer? A. That is correct. That is, I am not presently practicing. I am admitted to practice in two States.

Q. Yes. Now, what is your experience, if any, in the actual manufacture or design of spray units such as we are involved with here? A. The what?

Q. Your experience in the manufacture or design of spraying units such as we are involved with here? A. I have never been employed in a factory that was manufacturing those particular units as a full-time job. My experience has been purely in a consulting capacity in this [648] case and some other instances where I was involved in somewhat similar spraying equipment and aerosols.

Q. I see. Now, you say "this factory"—your answer which mentions the factory work indicated that you may have done part-time work in a factory.

Mr. Schmidt: If your Honor please, I believe this is improper. The qualifications of the witness were not questioned during his direct testimony.

The Court: Well, I think that is—the objection is sustained. We have heard him. Go ahead.

Q. (By Mr. Conrad) Mr. Fishleigh, do I recall that you did not participate in the preparation of the models 102-108 that you have alongside of you there? A. I didn't personally do them. They were done at my instigation and under my suggestions, but I did not personally prepare them.

Q. Were you on the premises when the commercial structures were taken and cut pieces— A. Not in that instance, no, sir. I have been on some others that were cut, but not on these.

Q. Now, our time is running out here, Mr. Fishleigh, and rather than dealing with all the remarks you made about the prior art, I thought we would just talk about the Slade patent, which I understood you to say was, as far as disclosure relevant to Scoggin is concerned, was about [649] equivalent to the Livingstone '480 patent. A. Well, I don't think that is exactly what I said. I said that insofar as showing a space is concerned, which was the point that was stressed as being the critical point of Livingstone, that in that respect I thought Slade showed just as well as the other.

Q. I see. Now, do you regard Slade as good a reference against the Scoggin patent as is Livingstone? A. In the light of the other references that were cited by the examiner in the file wrapper and even including those here, I think I would say yes.

Q. I see. Well, now, do you have the Slade patent before you? A. Yes.

Q. You notice, don't you, that in Slade there is no depressable dispensing member that extends up above the—up above the collar? A. That is correct.

Q. This is, however—there is, however, such a member in both the Scoggin patent and in the Livingstone patent? A. That is correct.

Q. Now, you also notice, do you not, that the seal in the Slade patent is not made by a shoulder which is located between two diameters in the overcap? A. That is correct.

Q. But that is the case in both Livingstone and in the Scoggin patent? A. That is correct.

[650] Q. Now, about this matter of whether or not we are dealing with a crowded art. I want to read to you a comment made by defendant's counsel in his pretrial brief and ask if you agree with it. This is the defendant's statement: "The weight to be given defendant's success is increased by the fact that it was achieved in an old and crowded art." Now, do you agree that we are dealing here with an old and crowded art? A. In that sense I do, certainly.

Q. And there is some other sense in which you don't? A. Well, I thought I explained previously that there were a lot of parts here but that the accomplishment of this, as it has shown up here and as I have listened to the testimony, sets it apart from the others into a field pretty much of its own.

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[658] DEPOSITION OF RICHARD HIGH,

a witness called by and on behalf of the Plaintiff, having been duly sworn by the Notary, deposed and said as follows:

Direct Examination by Mr. Cole.

Q.1. Will the witness state his full name and address? A. Richard High, Diamond Road in Cumberland, Rhode Island.

Q.2. What is your nationality? A. I am a citizen of the United States.

Q.3. Of the United States? A. That is right.

Q.4. What is your present occupation? A. Vice-President of the T. J. Holmes Company.

Q.5. How long have you held that office? A. I am not too sure about that now. I would say since about 1954. Probably before that, but to make sure I will say 1954.

Q.6. Where is the T. J. Holmes Company located? A. In Chartley, Massachusetts.

Q.7. Now I show you a patent to Lohse, 2,119,884, and ask if you have seen that before? A. I have, yes. [659] Q.8. Approximately when did you first see that? A. It probably was in 1937 or 1938.

Q.9. Shortly after the issuance, then? A. I believe so, yes.

Q.10. It is my understanding that you were concerned at about that time, or shortly after or shortly before, with the manufacture of devices according to this patent; is that correct? A. That is correct, yes.

Q.11. Will you refer to Fig. 2, please, and note the general arrangement of the device and tell me what it is? A. It is a pump device, with the cylinder, which is inside the bottle, and has a tube going out into the spray head. The unit is mounted on the bottle closer cap by means of a nut, and the top has a spray nozzle. Then the top is pressed down and released. When it is pressed down and released, it pulls up liquid and exhausts it through the spray nozzle.

Q.12. In the form of a spray? A. In the form of a spray, yes. The special feature on this is that there is an over-cap which has an internal thread, and which can be screwed on the external thread.

Q.13. You can refer to the patent number there. The patent [660] drawing has numbers. A. I refer to 4-a. The over-cap serves the purpose to hold the top of the unit down, and at the same time seals the unit to prevent leakage. Under the skirt or the rim of the over-cap, the lower end of the over-cap rests upon a gasket which makes the seal.

Q.14. Now, you have brought with you some samples, Mr. High? A. Yes, I have.

Q.15. In response to the subpoena which was served? A. Yes.

Q.16. Will you take the sample which has an over-cap on it, and compare it, if you will, with that drawing, Fig. 2, in the patent, and tell me if it conforms with it or if there are any differences? A. No, I believe it is essentially the same.

By Mr. Cole: I ask that the sample which the witness has just observed, be marked High Deposition Exhibit No. 125.

(High Deposition Exhibit No. 125 as above described, was then so marked for Identification.)

By Mr. Cole: Will the Notary please mark the Lohse patent No. 2,119,884 as High Deposition Exhibit No. 126?

(High Deposition Exhibit No. 126 as above described, was then so marked for identification.)

[661] Q.17. (By Mr. Cole) When did you first see a device of this kind having an over-cap, and constructed in accordance with this High Deposition Exhibit No. 125? A. I can say that I saw this the first time in the fall of 1937.

Q.18. What part did you play in connection with the manufacture or sale of those devices? A. I had nothing to do with the sale. I was making the payroll at the time. I was order chaser, and by making the payroll I handled all parts, because we had to weigh them up. People were working for piece rates, because it was piece rate work, and they completed so many at the counter and we would weigh it up and figure out the payroll.

Q.19. Over what period were these devices manufactured? A. I believe they were manufactured during 1937 and 1938.

Q.20. And that was done by the T. J. Holmes Company? A. That is right.

* * *

[663] Q.32. Did you play any part in the production of the elements which went into this sprayer, other than making up the payroll? A. No.

Q.33. But you were thoroughly conversant with the sprayer at the time? A. Oh, yes.

Q.34. There is no doubt about that? A. Oh, yes.

Q.35. You saw them at the time? A. Yes.

Q.36. And you are prepared to state that from your own knowledge [664] they were made in 1937 and 1938? A. That is correct.

Q.37. When were they discontinued? A. I believe they were discontinued probably in 1939; maybe the latter part of 1938, or 1939.

Q.38. What was the reason for discontinuing these? A. I believe that the unit for these people was too expensive. I believe it was a price question.

Q.39. A price question? A. Yes.

* * *

[667] Q.63. Do you know what liquid the Kimball Company used it with? A. With their window sprays, window cleaner sprays.

* * *

[669] Q.74. Now what function did this container cap perform, aside from the ones you have mentioned? You have mentioned that it prevented leakage from the sprayer? A. Yes.

Q.75. What other function did it perform, the over-cap? And I think also you mentioned that it held the plunger down? A. It holds the plunger down so the whole unit is [670] shorter. It requires less shipping space.

Q.76. Did you have any difficulty with leakage from these units when the cap was applied in the normal manner; the over-cap, I mean? A. No, we were not shipping them in unfilled bottles, but we didn't have, as I recall it, any complaints from Kimball that they were not performing satisfactorily.

Q.77. Of your own knowledge, do you know what the practice at the Kimball Company was in assembling these devices? A. No, I do not.

Q.78. You sold them simply the pump and the over-cap? A. That is right.

Q.79. And the over-cap was not applied when you sent it to them? A. Pardon me, the over-cap was on it when we shipped them, because the way you see it here, that

is the way we shipped them. Later on, I think the unit was too expensive and I think we took the over-caps off, and let them have this without the over-cap for less money. This is just as I can remember it, after twenty-two years.

Q.80. But when you sent the units out, the over-cap was threaded down, as I understand it, on this threaded collar which appears just above the leather gasket; is that correct? A. That is correct, yes.

Q.81. Did you apply any substantial torque, or was the over-cap [671] loosely applied? A. It was finger-tight.

Q.82. It was sufficient to give you a sealing action here? A. I believe so; I believe it is sufficient now.

* * *

[674] Q.98. About how many of these devices were made, very roughly? A. I think this one order was 12,000 pieces. I believe that was made, at least. Let us say several thousand. I think that is correct.

Q.99. That is according to your personal knowledge? A. Yes, that is right.

Q.100. And that was prior to 1940? A. It was, yes.

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[706] DEPOSITION OF ANTHONY J. RATICHECK,

being first duly sworn by the notary public, testified as follows:

Direct Examination by Mr. Cole.

Q. What is your address, Mr. Ratichek? A. My home address?

Q. Yes. A. 23 Fernwood Road, Summit, New Jersey.

Q. What is your occupation? A. I am coordinator of purchases for Richardson-Merrill, Inc.

Q. How long have you been so employed? A. My recollection is four years, or approximately four years, as such.

Q. I see. Well, then, prior to that time, where were you employed? A. I was employed at the J. T. Baker Chemical Company in Phillipsburg, New Jersey, which is a subsidiary of Richardson-Merrill.

Q. In what capacity were you employed by the Baker Company in the years 1950 to '55? A. I can't recall my official title there at that time, during those years, but I had responsibility for the purchasing department and also for the [707] production control department—production control and scheduling. At the time of my last title, however, prior to coming with Richardson-Merrill, I was manager of services operations, which included those departments and also included the materials handling department.

Q. When did you first come with the Baker Company? A. I think it was 1950.

Q. I am informed that the Baker Company makes chemicals of various kinds. It dispenses these chemicals in containers of one sort or another, does it? A. That's right.

Q. And I have asked you to bring with you a container and associated dispenser. Do you have that here, please? A. I do.

Q. Of what material is this container made? A. Polyethylene. To my best recollection, it is polyethylene.

Q. On the container there is a device which is threaded for reception on the neck of the container; is that right? A. That's right.

Q. And of what material is that made? A. Polyethylene.

[708] Q. It appears to have some dispensing provision in connection with it; is that right? A. That's right.

Q. Will you describe generally the function of that spout or dispenser there, if you will? A. Well, the dispenser was used on this bottle which, as I recall, was used primarily for hydrofluoric acid, a solution of hydrofluoric acid, and the dispenser was used for dispensing the hydrofluoric acid.

Q. I see. And it consists of the spout structure in the center there of some kind? A. It consists of this spout structure here.

Q. Yes. A. Together with an outer ring which was used as the sealing ring; put it that way.

Q. I see. Now, may we call that a— A. Pouring spout.

Q. —an integral container cap and pouring spout? A. Not a cap.

Q. It is a container cap in the sense that it threads on the neck of the bottle, is it not? A. That's right, but it is not a cap in the true sense of the word of finishing off, complete [709] enclosing.

Q. I see. Now, then, the device was finished off with this over-cap; is that right? A. With this over-cap, that's right.

Q. Which threads onto the neck of the spout-container cap structure? A. That's right.

Q. Were devices of this kind, which you have just described, used by Baker in the years '52 to '56, let us say? A. Yes, they were.

Q. That was while you were with the Baker Company? A. That's right, to the best of my knowledge and recollection, they were.

Q. That's right.

Mr. Cole: Will the reporter please mark this spout structure Ratichek Deposition Exhibit 130.

(Spout structure marked Ratichek Exhibit 130 for identification.)

Mr. Cole: Please mark this over-cap Ratichek Exhibit 131.

(Over-cap marked Ratichek Exhibit 131 for identification.)

[710] Mr. Cole: Mark this bottle 132.

(Bottle marked Ratichek Exhibit 132 for identification.)

Q. Do I understand, Mr. Ratichek, that the J. T. Baker Company manufactured hydrofluoric acid? A. They manufactured an aqueous solution of hydrofluoric acid.

Q. And that— A. Aqueous—may I amplify that? When I said manufactured, as far as I remember, we may have purchased this as the aqueous solution in bulk and then refilled these bottles with it. I'm not sure that we

were in the manufacture of the aqueous from the anhydrous solution at that time, from the anhydrous hydrofluoride.

Q. When you say these bottles, you mean the bottles of the type of Exhibit 132? A. We filled those with the solution.

Q. You filled these? A. Yes.

Q. That was during the years prior to 1956, was it? A. Yes, sir. To the best of my recollection, it was.

Q. When was this device which is threaded onto [711] the neck of the bottle, such as Exhibit 130, applied? Was that after the filling of the bottle? A. I'm quite sure it was.

Q. In other words, you put the acid in the bottle and then you applied the device 130? A. Yes.

Q. Were devices of the type of Exhibit 130 used prior to 1956 for this purpose? A. My memory would say yes.

Q. And then after the container cap-pouring spout structure was applied, then this over-cap was applied, Exhibit 131; is that correct? A. That's right, sir.

Q. Now, I take it that you had a seal here between this threaded skirt on the pouring spout device, Exhibit 130, and the neck of the bottle; is that correct? A. Yes. There was one there—

Q. Will you show us where that was, sir, remembering that when you point it will not show on the record? A. As I recall, there was a seal exhibited in several places. One was, of course, between the top of the bottle and the lower portion of a skirt inside, and also, of course, the threads themselves act as a [712] seal.

Q. I see. Now, you are referring to the— A. Inner thread and the thread on the bottle.

Q. Yes. And the inner thread is on Exhibit 130; is that correct? A. That's right.

Q. There was a seal effected at that point in much the same manner as was effected with any other container cap? A. Any other container cap.

Q. Yes. Now, will you refer, please, to the over-cap, Exhibit 131, and tell us how that sealed? A. There was seal there. There were actually two seals that I know we

looked at. One was the upper lip of the outer skirt of the pouring spout, Exhibit 130, and the inner ring of the cap on Exhibit 131.

Q. That is the flange which is inside of the over-cap? A. That's right.

Q. Exhibit 131, up inside and above the threads; is that correct? A. That's right, yes. And there was also, of course, some seal between, again—we always had some seal, as a normal cap would have, between the threads [713] of both pieces.

Q. I would question whether the seal effected by the threads would be sufficient to contain the liquid. A. I don't know that we depended on that by itself. We were looking at the seal between the outer skirt and the inner ring of the cap.

Q. Yes. Well, now, perhaps you can clarify the testimony you have just given by reference to this patent, to Livingstone 2,763,402, granted September 18, 1956, and I call your attention to Fig. 4 of that patent, which seems to me to show a structure somewhat similar to that which you have described.

Now, perhaps you can, by looking at the Livingstone patent and referring to the reference characters there, explain where the seal was effected between the over-cap, which I believe bears the numeral 84— A. Is that 97?

Q. 84. A. 84, yes.

Q. —and the pouring spout-container cap structure, which is designated 95.

Can you tell us now where the seal is effected? A. Well, the seal is effected, of course, between— [714] and I don't know if this number 97 has any significance here; I can't see where that goes to. Does that go to the lip of the cap? Is that the lip of the cap, the inner lip of the cap?

Q. It looks to me as though that goes to the inner lip, which is up inside the cap, yes. A. Yes, that is what I think.

Well, the seal is effected between the inner lip, then, if 97 refers to it, of the cap and the lip designated at the top of 95.

Q. I see. In other words, the upper edge of the collar 95 fitted outside of the lip 97 and inside of the over-cap wall proper; is that right? A. 84, yes.

Q. 84. I take it it was necessary, since you were bottling a toxic substance, to have an effective seal on your bottle? A. Yes, it was a highly corrosive substance, in addition, as you may well know.

Q. Was this seal, when properly made, effective for the purpose? A. We used many bottles for this purpose.

Q. Do you have any idea of how many of these pouring spouts and overcaps you used in the years, say, [715] 1952 to '56? A. I would not venture a guess as to the total quantity, but certainly it is a number of thousands.

Q. I see. Perhaps tens of thousands? A. Tens of thousands, I would say.

Q. Do you happen— A. I have made no summarization of the total number of units.

Q. I see. Do you happen to know whether these early devices were made under any of the Livingstone patents? I am not asking your expert opinion on the patent, but simply do you know whether any royalty was paid to Livingstone. A. As far as I remember, yes, there were. In fact, as I recall some of the information, we made this agreement with Livingstone. I'm not too sure whether it was 1950 or '51 or '52—I don't have the records here—but we made an agreement with Livingstone to use these caps under—either he had a patent pending or he was granted a patent at the time, and I recall that we made an agreement with Mr. Livingstone to use these caps.

Q. Did the Baker Company make the device, the spout container cap and the over-cap structure, Exhibits [716] 130 and 131? A. Baker did not manufacture these at that time.

Q. I see. Do you know from whom they purchased these? A. They purchased these from Mr. Livingstone.

Q. Did he make them personally? A. We, of course, had no records as to whether he made them personally, but we understand that he had someone else manufacture them for him.

Q. Now, we are speaking still of the period prior to 1956; is that correct? A. That's right.

Mr. Cole: Will the reporter please mark this patent Exhibit 133.

(Copy of patent No. 2,763,402, dated September 18, 1956, marked Ratichek Exhibit 133 for identification.)

Q. Now, if you will refer again to the patent—'402, let's call it—Exhibit 133, Fig. 4, I think you will see that the container cap 86 and the spout structure 95 are separately formed, and it appears that in Exhibit 130 the container cap, this threaded skirt as the base which is threaded on the neck of the bottle, is integral with the pouring spout structure and with [717] the collar which is threaded to receive the over-cap. Do you know why this Exhibit 130 was made in one piece rather than as shown in Fig. 4? A. I do not.

Q. Do I understand you to say that devices of this type, Exhibits 130 and 131, the spout structure or adapter, as Livingstone calls it, and the over-cap were of this type during the period, say, 1952 to 1956? A. To the best of my recollection, that's right.

Q. Mr. Ratichek, we have had one of these caps which was furnished to us sectioned so that the internal structure can be seen, particularly the sealing structure which engages the lip of the bottle neck and the sealing structure between the over-cap and the collar on which it is threaded.

Will you look at that and see if that is, according to your best recollection, the type of device which was used by Baker in the years preceding 1956? A. As far as I can determine at this point, yes.

Mr. Cole: Will the reporter mark that, please, Exhibit 134. Better make the pouring spout structure 134 and the over-cap 135. We can take [718] them apart.

Mr. Schmidt: They are both sectioned?

Mr. Cole: Yes.

(Section of pouring spout structure marked Ratichek Exhibit 134 for identification.)

(Section of over-cap marked Ratichek Exhibit 135 for identification.)

Q. Take another look, Mr. Ratichek, at Exhibit 130. I think you will find the legend on top of the over-cap—that should be Exhibit 131; the tag has come off, but it

is the over-cap, Exhibit 131—and there is a legend barely discernible on the top. Will you read it, please? A. Well, it has the Baker symbol on it. It also has "Drain back spout" and down below it it has "patent pending."

Q. The over-cap, Exhibit 131, has been applied to the pouring spout, Exhibit 130, by threading it down.

I ask the witness to observe that there is a clearance between the over-cap structure and the skirt of the spout which is threaded onto the container; is that correct? A. That's right.

[719] Q. Do you know what the purpose of that clearance is? A. Well, I would suspect that it is to allow the cap to be fitted down as far as possible onto the pouring spout.

Q. In other words, if you did not tighten that cap down, you might have trouble with leakage; is that correct? A. You might have trouble with leakage because the seal would not be effective. Certainly, if the shoulder of the pouring spout is sufficiently high, you would have obstruction there, you would have a meeting, and then there wouldn't be enough clearance for the pouring spout lip, outer lip, to go up into the cap.

Q. I see. You are talking now about this internal seal? A. Internal seal.

Q. In the over-cap? A. Yes.

* * *

[734] Cross-Examination by Mr. Schmidt.

Q. What is the purpose of the spout, Exhibit 130, Mr. Ratichek? The purpose. A. What is the purpose of the spout?

Q. Yes. [735] A. Well, as far as I know, it was to allow an even flow of the fluid from the bottle.

Q. Is it, as its name implies, a spout to permit pouring of the liquid from the bottle? A. Pouring of the liquid from the bottle.

Q. Would you say that it was used primarily, if not solely for hydrofluoric acid? Is that correct? A. I don't know that I can say solely, but to my recollection this was the only purpose that we used it for. We may have used it for some other items.

Q. Why is there a need for a special type of spout? Is it because of the nature of the chemical being poured from the container? A. I would say that this—to my knowledge, it was because of the nature of the chemical. Acids, in particular, there is great concern about spillage—overspillage—of the acid. We wanted some control of flow, as I recollect.

* * *

[742] Q. But in so far as you know, Exhibit 132, with the structure of Exhibits 130 and 131, in the sale of hydrofluoric acid, was not for the housewife, to be placed on the shelves of a grocery store, for example; is that correct? A. No. I'm quite sure that it was not intended for that sale, but if it got there, it was purely a mistake.

* * *

[744] Q. Now let us assume that some other liquid, say, a liquid detergent, were used in a bottle of that kind. Is there any reason, in your view, why it could not be dispensed through this same pouring spout structure? A. Well, I would say any liquid could be dispensed through it.

Q. For instance, if this bottle were filled with a liquid commonly used in the household, such as Clorox or liquid Ivory, or something of that sort, it could be packaged in precisely this manner and displayed on shelves along with other household products; is that correct? A. Well, as long as the liquid was compatible with the materials of construction, I see no reason [745] why it couldn't be.

Q. Yes, the only thing I am trying to bring out here is that I rather got the implication from Mr. Schmidt's questioning that this structure would not be suitable for other liquids, and you gave an opinion based on his question. I simply want your opinion as to whether there is any significant connection between the liquid and the pouring spout over-cap structure, or is it useful for any purpose. A. I would say that it would be useful for any purpose where liquid is contained and the liquid is compatible with the materials of construction. As far as the design of the cap is concerned, or its use on a bottle, it would appear that it could be used on any liquid.

* * *

[756] DEPOSITION OF ROBERT D. WISE,

having been first duly sworn, deposed and testified as follows:

Direct Examination by Mr. Schmidt.

Q. Please state your full name and address. A. Robert D. Wise, 6936 Crystal Springs Road, Cincinnati 27.

* * *

[763] Mr. Schmidt: Q. Mr. Wise, what is your occupation, please?

A. I am president of Calmar, Inc.

Q. Calmar, Inc. being the plaintiff in this lawsuit. A. Yes.

* * *

[764] Q. What do you mean by the terminology "Calmar Division of The Drackett Company"? A. Perhaps I should explain the corporate relationship. Calmar, Inc. is a wholly-owned subsidiary of The Drackett Company. Its purpose in business is essentially that of a sales and engineering and development corporation. The Calmar Division of The Drackett Company is [765] a manufacturing operation located here in Los Angeles.

Q. Is it also owned by The Drackett Company? A. Yes, it is.

* * *

[769] Q. What is your relationship to the other companies of which we have been speaking? A. I am a vice president of The Drackett Company; I am also a vice president of Plastics, Inc. and vice president of the Marmac Company.

* * *

[782] Q. What do you mean by a shipper sprayer? A. We consider a shipper sprayer as a sprayer that is mounted on a container and becomes in effect an integral part of the package, as compared to sprayers attached to a container, such as the other side of the container.

Q. And by mounted on a sprayer you mean with a part of the sprayer actually protruding into the container? A. Correct.

Q. With the sprayer attached perhaps to the neck of the container? A. Correct.

Q And with that type of construction you usually use the terminology "shipper sprayer"? A. Correct.

Q. Prior to the discussion with Mr. Scoggin in 1955 had there ever been any kind of a shipper sprayer that you knew of? A. I believe the correct answer is "yes."

Q. What was the nature of such sprayer? A. To the best of my knowledge, samples of what we call our SLP sprayer had been distributed to people such as Cook Chemical.

[783] Q. For what purpose? A. Presumably for their evaluation for use as a possible shipper sprayer.

Q. But that particular type of shipper sprayer had not at that early date been commercialized? A. It had not been commercialized to the extent that it was being offered as a standard product.

Q. Do you know the purpose that Cook Chemical Company, through Mr. Scoggin, had in mind for a shipper sprayer? A. I believe that that is obvious. The introduction of sprayers in the insecticide industry, to the best of my knowledge, was done by hanging a sprayer on the side of a bottle or a can. I am confident that there were objections from the trade to this from the viewpoint that the sprayer was probably subjected to a certain amount of pilferage in stores. It would be possible for the sprayer to become damaged either during shipment or during subsequent handling by the trade.

Q. When the sprayer was shipped hanging on the side of the bottle or other container, what was required of the customer after purchasing? I am speaking of insofar as— A. Are you speaking of Mrs. Housewife?

Q. Yes, so far as placing the article in use is concerned. A. She would remove the container cap from the container and then insert the sprayer.

[784] Q. The container cap was an imperforate cap adapted to hold the contents of the container within the container; is that correct? A. Correct.

Q. Then, from what you say, do I understand that Mr. Scoggin had in mind packaging with the sprayer

mounted in the container and elimination of the imperforate cap? A. Very definitely, but I am sure Mr. Scoggin was not the only one who had such a thing in mind.

Q. Do you recall at that time anyone else who was making the same request of you? A. I don't recall specific customers but I do recall talking to many, many people about it. This was a subject of growing interest.

Q. Your answer to his problem, I take it, was the LP-25? A. Correct.

Q. S-25? A. S-25.

Q. S-25-LP? A. Yes.

Q. And you submitted samples of that type of sprayer to Cook Chemical as well as others? A. I believe that we did. I know those samples were submitted prior to my joining the Calmar organization.

Q. To Cook Chemical Company? [785] A. Yes.

Q. What was the reaction of Cook Chemical Company to that subject for their problem? A. Their reaction was not favorable, that I recall it.

Q. Why? A. At that time I believe they found that it was difficult to contain liquid with the S-25-LP samples that had been submitted to them.

Q. Do I understand, by that, that when the S-25-LP sprayer was mounted in the container it would not retain the liquid in shipment? A. I assume that is correct. I don't recall ever having seen or having discussed with Mr. Scoggin or Cook any specific test results that they had had. I do recall that they were not pleased with the samples that they had received. I can't say when the first samples were submitted to Cook Chemical.

Q. But you believe that it was possibly before you took over as president? A. Yes.

Q. And you do recall discussing a sprayer with Mr. Scoggin after you took over as president? A. That is right.

Q. Did Calmar, Inc. ever furnish that particular sprayer to Cook Chemical Company, other than the samples, of course? [786] A. Other than the samples, I don't believe we did, but I can't say definitely.

Mr. Schmidt: I ask the reporter to mark as Defendant's Wise Deposition Exhibit 1 for identification this sprayer.

(The S-25-LP sprayer referred to was marked by the notary as Defendant's Wise Deposition Exhibit 1 for identification and made a part of this record.)

Q. Mr. Wise, I now hand you a sprayer furnished to us this morning, which has been marked for identification as Defendant's Wise Deposition Exhibit 1, and ask you whether or not that is the S-25-LP sprayer about which we have been talking. A. Yes, it is.

Q. What is there about that sprayer that distinguishes it from earlier sprayers and adapts it for use as a shipper sprayer? A. The design, or the configuration, of that sprayer was initially developed by the Calmar Company, presumably because of their feeling that there was a need for a shipper sprayer. In order to contain leakage they designed this particular configuration, which involves the use of two collars having between them a flexible O ring. To the head of this sprayer they incorporated two lugs so that when the head was depressed and locked into the collar [787] assembly it, in turn, depressed the flexible O ring, forcing it against the side of the piston tightly so as to confine liquids within the container. Further, in order to prevent leakage up through the sprayer from the inside, a cap was attached over the orifice disk construction on the head.

* * *

[789] Q. In actual production of sprayers of that nature as represented by Defendant's Exhibit 1, did you find that you were entirely successful so far as percentage of leakage was concerned? A. No, we were not entirely successful insofar as leakage was concerned. We were partially successful.

Q. Where you were unsuccessful what was the cause for it? A. The cause of the unsuccess that we did have in many cases was due primarily to leakage that occurred at two places; one, underneath the container cap. I think [790] that Mr. Scoggin would agree that most sprayers that are sold are sold using what is known as a 400 finish cap. The cap is approximately a quarter inch

high. The amount of thread engagement, because of the shortness of the dome of the cap, is somewhat limited. Consequently, if the flange on the sprayer extends across the extent of the dome of the cap and to that is added on the lower surface underneath the flange a gasket, the combination of the flange and the gasket takes up so much room in the dome of the cap that as a result you have insufficient thread engagement. That did result on several occasions in our having leakage at that point.

* * *

[791] Q. Did you ever rectify the leakage problem between that cap and the container? A. Yes, we did, to the satisfaction of some users.

Q. Referring again to patent Scoggin Exhibit 19, you are referring, are you not, to the cap that is designated by the numeral C in Figures 1 and 2? A. Yes.

Q. And the difficulty arose at the gasket 16 and the inability of the gasket 16 to prevent leakage to the outside of container B? A. I wouldn't say that is quite correct, Mr. Schmidt. It may not be necessarily due to the inability of the gasket to prevent leakage. The leakage may have been due to the fact that because of insufficient thread engagement or the cap not being tight enough the gasket failed to perform the function.

[792] Q. In other words, the threading was not sufficient to hold the gasket 16 sufficiently tight against the upper edge of the neck end of the container B? A. That is correct, if there is insufficient thread engagement or if the container cap had not been tightened adequately to effect a seal between the container neck and the gasket.

Q. You say No. 2 had another leakage problem? A. Yes.

Q. What was that? A. That was leakage that occurred primarily between the O ring, around the piston.

Q. Again referring to the patent Scoggin Deposition 19, you are speaking of the O ring that is designated by the numeral 30 in Figure 2? A. Correct.

Q. Do I understand your previous testimony that, in theory at least, the O ring 30 was compressed tightly between flange 44 as shown in Figure 3 to effect the seal? A. Correct.

Q. But notwithstanding that, you had difficulty in leakage? A. We did have difficulty in leakage because of the special problems that arose.

Q. What do you mean by special problems? A. For example, the O ring that we normally used [793] was made of a flexible vinyl chloride which had a certain amount of compressibility. We discovered that this O ring was subject to chemical attack, for example, in the case of insecticides. The amount of the attack varied with the type of insecticide, the ingredients in the insecticide. On some occasions the O ring would become smaller, harden, would shrink so that, in effect, you were losing the seal at that point because of chemical attack. Now, in this case the leakage was not necessarily due to faulty construction of the sprayer, but was due to chemical incompatibility.

Q. Was the S-25-LP sprayer, as illustrated for example by Exhibit 1, actually made and sold for insecticide purposes? A. Yes, it was.

Q. Do you recall whether or not that type of sprayer was ever sold to Cook Chemical Company, the defendant in this case? A. I don't know, I think perhaps to keep things in a proper context it should be explained that Exhibit 1 refers to the configuration that we are presently manufacturing.

Q. I understand. What I had in mind was a sprayer of that type being sold by Calmar. A. Yes.

Q. For use in insecticide containers? [794] A. Yes.

* * *

Q. I want to know whether or not Calmar, Inc. actually sold a sprayer of this type to customers who used them for insecticide purposes. A. Oh, yes.

Q. To any large extent, or did you go merely slightly beyond the experimental use as you indicated a while ago? A. I would say to a fairly large extent.

Q. Were these customers who purchased that type of sprayer for insecticide uses who complained because of the leakage? A. Yes.

Q. Who were they? A. Those customers were essentially S. C. Johnson and Colgate-Palmolive.

Q. Did they at any time request that you rectify the error? A. I would say quite definitely.

Q. Did you make any attempt to remove the leakage problem for them? A. Certainly.

[795] Q. Did you modify the S-25-LP sprayer in a way that solved the problem? A. Do you mean the S-25-LP sprayer?

Q. Yes. A. We made modifications in the S-25-LP sprayer in an effort to correct and solve leakage problems that developed. We realized that there was a problem of chemical incompatibility, but we did not know the seriousness of the problem.

* * *

[801] Q. Did you attempt to sell boots per se? A. I wouldn't say we actually attempted to sell them; we merely presented the boot as one approach to, frankly, dispenser customers as well as sprayer customers.

Q. You did not tool up for production? A. We did not tool up for production. We did consider, I believe, a four-cavity die which might enable us to run a number of samples to give us some indication of cost cycles and so forth.

Q. Did you ever produce any samples? A. We made samples.

Q. Did you distribute the samples among your customers? A. Yes, I am sure we did.

Q. What was their reaction? A. Well, their reaction was somewhat to be expected, I think. We were offering this as one approach that might be considered at the time that it was offered; not as one that would be considered as the ultimate answer. Most of the people who saw it objected to it on the basis that, number one, this was something additional that they would [802] have to purchase; number two, this would require an additional operation in their plants which they were not performing. They would either have to put it in the container and then insert the sprayer or they would have to put the boot on the sprayer and then put the sprayer on the dispenser involved: number three, there was the viewpoint that the housewife might have some objection

to the problem of removing a sprayer and getting their fingers wet with this foul, goopy liquid and having to throw it away.

* * *

[843] Q. What was the nature of your initial instructions with respect to development of the SS-40? A. Well, the decision to develop a new sprayer, Mr. Schmidt, was essentially my decision. We submitted evidence to you yesterday of the grievous, sad experience we were having with our S-25-LP, so that we had reason to [844] have a lack of complete satisfaction with the product in spite of our continued efforts over a period of time to make a product more suitable for various types of customers. I believe we did discuss it, even to the extent of adding another part, such as a boot, and this all occurred in the fall of 1957, as I recall. It became obvious to me that the development of a new sprayer would be essential.

Q. In the fall of 1957 what, more specifically, were your instructions as to the kind of sprayer that you wanted developed? A. Sometime in the fall of 1957 I believe we had had called to our attention a Model 2 Bakan sprayer. I don't remember when it first occurred, I don't remember when I first saw it. The Bakan people I think are reasonably aggressive and I feel confident that we heard of this development from a number of sources and we actually saw the product. I don't remember when I first saw it. It seems to me it was probably late fall of 1957. Now, I don't know whether we were talking about October or September, or what have you.

The situation was disturbing to us only in that the timing of the introduction of a new product by Bakan seemed to be excellent, because we were in grievous difficulty. When we first saw their product we, frankly, felt a little bit of relief in our concern. They introduced the Model 2 sprayer with an overcap. The overcap [845] did not contain leakage within the container. It was just merely a simple matter to turn the container over and the liquid would often almost gush into the overcap.

I don't remember specifically, but it seems to me I had many occasions to talk about the development of the

Bakan sprayer and I found that it was received with a certain amount of interest.

I can only recall one thing in which there seemed to be unanimous opinion about the Bakan shipper sprayer, and that is that it provided a flat surface on the overcap which made it quite easy for the supermarket to stamp their price.

We felt that the product had a basic difficulty in that it did not attempt to contain liquids within the container and prevent them from surging into the overcap. It seemed to us that essentially that was desirable, to keep it from going into the overcap if at all possible, because if the Bakan overcap was abused during shipping or abused in a customer's plant—say a torque machine came down and hit it or turned it—it might tend to leak.

Furthermore, they made the cap of a very soft regular polyethylene material, to my observation. It was obvious to me that they beefed up the sidewall in an effort to prevent or minimize the jumping of the threads.

We were disappointed in the product to the extent that in our opinion, or at least in my opinion, it was not a sufficient advancement to do real credit to the industry. [846] Consequently, because we recognized that neither the S-25-LP or the Bakan Model 2 shipper sprayer which was first introduced was really the product that industry wanted from a packaging viewpoint, we determined that we should attempt to develop something that would more adequately serve our customers' requirements.

Now, we had had in Calmar for a good many years a number of good, clever people. Our research efforts had always been on a small informal basis. In December of 1957 it seemed to me to be desirable to augment our staff by employment of a skilled, capable engineer, because we were faced with real problems with our own customers, our own products; but also, I firmly believed, on the basis of our own increasing sales, conversations with many people, that we had a real opportunity at hand, to say nothing of the challenge.

When I employed Mr. Corsette he came to us from a company who had been building an automatic machine for us. It was necessary for him to acquaint himself with

equipment that we have in our plants, our procedures, the nature of the products. But I can assure you that in the next two to three months—and I believe he went to work for us in about the middle of December—

Q. Of 1957? A. Of 1957—that we had many conversations about sprayers, methods of sealing. He would be responsible, [847] pretty largely, for the work that was going to be done. He had many ideas of his own. To the best of my knowledge, we even had Mr. Cole in on a couple of our conversations. All of this terminated in our developing the SS-40 sprayer.

Now, as far as the overcap is concerned, there was no one that said to us—no one—"Why don't you put an overcap on the sprayer?" We told people we were developing the sprayer. No one said that. This may be a poor analogy but to me it is something like the compact automobiles. The Falcon and the Corvair are both compact automobiles. They certainly are markedly different in their construction, but I know a lot of people, including my little bride, who like the idea, the appearance of the compact automobiles.

* * *

[850] Mr. Schmidt: Is it not fair to say that the Bakan overcap enclosed, and thereby protected, the parts of the sprayer that projected above the collar?

A. It would seem to me that there could very well be an element of protection.

Q. Does it not say that there was an advantage in that it prevented leakage of material to the outside of the container? A. That would be an advantage if it was the case. We never believed that such was the case upon a satisfactory basis for industry, and we feel that our conviction in this regard was confirmed by Bakan at a later date when they sent around letters admitting that the former sprayer which was their first shipper sprayer would not contain leakage.

Q. Then is it your position that the only advantage of the overcap lies in the advantage that it can be dusted [851] easily and can receive the price of the product? A. They are the advantages that we saw in it. It could very very well be.

Q. Were those the only reasons for your having adopted an overcap? A. No.

Q. Were they some of the reasons for your adoption of an overcap? A. I wouldn't say that they are even some of the reasons.

Q. Then what were your reasons for adopting an overcap? A. As I recall, the reasons that we adopted an overcap were to provide a method of holding in place a series of internal seals and also to provide a secondary safety measure; that in the event the series seals were disturbed, the leakage would be contained within the overcap, although that was not the principal function.

Q. Then the purpose for the seal between the overcap and the collar in your construction was to prevent leakage to the outside of the container in the event that any leakage was found in the overcap; is that correct?

The Witness: Will you repeat the question.

(The pending question was read by the reporter.)

The Witness: That is one of the purposes.

Q. Is it not true that another advantage of your [852] overcap is that it does, in fact, protect the head of the sprayer against damage during shipment? A. Yes, it would protect our sprayer; not particularly against damage. It protects to a large extent the series seals, holds them in place.

Q. Then would you not agree with me that the overcap does, in fact, protect the head of the sprayer against damage? A. Oh, yes, if someone were to take our sprayer or the Bakan sprayer and hit the head of that sprayer against this table it could very well be damaged.

Q. And it also has the advantage of protecting the head of the sprayer in shipment; is that not correct? A. That is correct.

Q. Does not the overcap which you adopted have the same advantage as the Bakan overcap, in that it holds the sprayer splunger depressed? A. Yes, that is true, the same as the prior art shows.

Q. And does it not hold the sprayer plunger depressed in a manner different from the way in which the S-25-LP is held depressed? A. Correct.

Q. By way of clarification, do I not understand it to be your position, Mr. Wise, that you have incorporated some advantages in the SS-40 not to be found in the Bakan 2 sprayer? [853] A. That is right.

Q. And that those advantages have to do principally with the sealing means to prevent leakage of the fluid from the container into the overcap? A. That is one of the advantages, yes.

Q. In the construction of the SS-40, if there are any advantages in the Bakan overcap, those advantages have been carried over into the SS-40; is that not true? A. Mr. Schmidt, now, let's keep this in the proper context.

Q. I would be happy to have you put it in the proper context as you answer the question. A. It is true that an overcap will provide protection for any sprayer during shipping, the same as an overcap provides protection on an aerosol valve during shipping. That advantage we recognized and have felt it was properly useful. I can assure you, on the basis of the evaluation that we made of the Bakan sprayer—and I would have to say from a viewpoint of its acceptability, marketingwise, I would have to take the responsibility for the opinions that I arrived at in connection with the Bakan sprayer. I can also assure you that I told our people very firmly in discussing the Bakan shipper sprayer that we did not want it and this we would not copy.

(There was a ten-minute recess.)

Mr. Schmidt: Will you read that last answer, please. [854] (The previous answer was read by the reporter.)

Mr. Schmidt: By "this" you mean the Bakan overcap?

A. The Bakan overcap, if you want to make it that simple. I was referring essentially to the entire construction.

Q. The entire construction of the Model 2 sprayer you are speaking of? A. Yes.

Q. Including the sprayer per se and the overcap? A. That is right.

Q. But you did not give any instructions not to copy the overcap, as such; is that correct? A. I definitely gave instructions not to copy the overcap, as such. You must

remember that if we had copied the overcap, as such, we would have used an overcap that would be identical to yours. We have not used an overcap identical to yours.

Q. In what respect is it not identical? A. The overcap that we have provides a skirt on the inside of the cap that fits into a groove of the collar. The Bakan Model 2 overcap sprayer did not have this feature. Our cap was designed to fit a single buttress thread on the collar. The Bakan overcap is not of that type. It was designed to fit two normal thread designs on the Bakan collar.

The Bakan overcap is made of regular polyethylene, [855] or the initial one was. Ours was made of linear polyethylene. We had been a little bit flattered that in recent months Bakan has seen fit to go to a single continuous thread, to linear polyethylene, and also to a skirt inside the overcap.

* * *

[856] Q. You recall that I asked the question, what are the differences, if any, between the two overcaps, and you named two differences, one being the way in which the seal is formed and the other being material, is that correct? A. No, the other was the function of the skirt to assist in the preventing of thread jumping by the overcap.

Q. Except for those differences, my question is, are the two caps indentical? A. The two caps are not identical. The materials are different for what we believe to be excellent reasons.

Q. They are identical, are they not, in that they both house the head of the sprayer? A. Correct.

Q. They are identical, are they not, in that they both [857] hold the plunger of the sprayer depressed? A. Correct.

Q. They are identical in that they both seal? A. Correct.

Q. They are identical in that they both attach to a collar through the use of screw threads? A. Correct.

Q. They are identical in that they both house not only the head, but the collar? A. Correct.

Q. They are identical in that in each instance the lower-

most peripheral edge of the overcap does not engage the upper surface of the container cap? A. Correct.

* * *

[865] Q. The S-25-LP sprayer leaked in much the same manner, or at least to much the same extent, as the Bakan 2 sprayer, is that not correct?

Mr. Cole: Will you read that question.

(The pending question was read by the reporter.)

The Witness: I don't believe that is quite correct.

[866] Q. Perhaps it would be more proper to say that they both leaked? A. Right.

Q. Now, if the Bakan overcap had been applied to the S-25-LP sprayer in the manner testified by Baxter Scoggin, the leakage to the outside of the container would have been prevented, would it not? A. Not in my opinion.

Q. Why not? A. I saw many examples on store shelves of the Bakan shipper sprayer where leakage occurred almost immediately by just tipping the container over on the side on the shelf.

Q. The leakage to the outside of the container? A. The leakage to the outside.

Q. Why was there such leakage? A. The liquid was not being contained within the overcap. Now, as a matter of record, and purely from the viewpoint of ethics, I would not want to leave Cook Chemical Company with the impression that I deliberately went around turning over their bottles and leaving them that way.

Q. Would you concede that there were instances where the Bakan overcap would retain the liquid and not permit it to flow over the container? A. I would concede that there were instances, but the number that did leak appeared to be to the disproportionate.

* * *

[889] Direct Examination (Resumed)

by Mr. Schmidt.

Q. Mr. Wise, you are the same Robert D. Wise who testified in this room earlier this week? A. Yes.

Q. Do you understand that you are still under oath? A. I do.

Q. Have you been present and listening to the testimony of all of the witnesses this week? A. I have.

Q. Do you agree with the testimony to the effect that the SS-40 shipper sprayer has been successful? A. Yes.

Q. Do you consider that success to be outstanding? A. I believe so.

Q. Do you believe that the success has been substantially greater than whatever success may have been enjoyed with respect to the bayonet type of sprayer? A. Yes, it has. To keep things in their proper relationship, the SS-40 sprayer has been very successful; more so than the S-25-LP. It represents part of the [890] success of the continuing trend, upward sales trend, of shipper sprayers.

Q. Has the plaintiff in this case or any of its affiliates enjoyed any greater success with reference to any other type of sprayer in connection with the commercialization of insecticides?

The Witness: Will you repeat the question, please.

(The pending question was read by the reporter.)

The Witness: It is difficult for me to say that the success has been greater or lesser. I don't mean to avoid the issue. To do that I would have to recall essentially sales volumes and I cannot recall specifically sales volumes in the past.

Q. Mr. Wise, I am not intending to call upon you to furnish us with figures, but I should like to have you answer the question, at least generally, with respect to increase or decrease in sales volumes. A. We enjoyed, because of the introduction of the SS-40 and its favorable consideration by many companies, increased sales of the SS-40 sprayer, including sales to manufacturers of insecticides. The success of the SS-40 sprayer in connection with its acceptance by other manufacturers of insecticides has somewhat paralleled our other efforts in this regard.

Q. Is it fair to say that you have had outstanding commercial success with the SS-40 sprayer? [891] A. We are happy with its success, very happy.

Q. To what do you attribute that success? A. We attribute the success of the sprayer to the fact that we developed and marketed a unit which was superior to any on the market at the time of its introduction.

Q. What features of the sprayer contributed to that success? A. The features of the SS-40 sprayer which contributed to its acceptance by industry were primarily due to the fact that we had in effect double protection against leakage. We had a series of primary seals supported with secondary seals. These features were not present in any other sprayers.

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[907] DEPOSITION OF E. G. "PAT" O'REILLY, having been first duly sworn, deposed and testified as follows:

Direct Examination by Mr. Schmidt.

Q. Will you state your full name, please. A. E. G. "Pat" O'Reilly.

Q. And your residence address? A. 10519 Downey Avenue, Downey.

Q. By whom are you employed? A. Wilco Company.

Q. How long have you been so employed by that company? A. Roughly about a year and three-quarters.

Q. In what capacity? A. Plant manager.

Q. Have you been plant manager all the while you have worked for Wilco? A. Yes.

Q. By whom were you employed prior to working for Wilco? A. I was self-employed.

Q. Where? A. In Kansas City.

Q. What did you do prior to that? A. I was production manager for Cook Chemical Company.

[908] Q. When did you commence work for Cook Chemical Company? A. In the early part of 1950.

Q. When did you terminate your employment with Cook? A. In April or May of 1954, I believe.

Q. And your duties with Cook were what? A. Production manager.

Q. At what location? A. I headquartered in Kansas City.

Q. Where did you do your work? A. In Kansas City.

Q. Were you ever located anywhere other than in Kansas City while working for Cook? A. No; with the exception that I was in charge of their Jacksonville, Florida, operation and one in Baton Rouge.

Q. What were your duties as production manager? A. Well, you name it, if it had anything to do with production, from purchasing to the time it is shipped, manufactured, packaging, formulating.

Q. That is all within the category of production manager? A. That is right.

Q. What was the nature of the products that you had control of? A. Insecticides.

* * *

[913] A. There was no leak-proof sprayer. In shipping, warehousing, many times cases get turned upside down, and no ordinary sprayer would fit in there to keep it from leaking.

Q. Are you saying that if you inserted the sprayer in the bottle with nothing more, and placed those bottles in a carton, let's say of ten or twelve, that you would have leakage if it upset? A. Oh, yes, definitely. The weight of the bottle would be sufficient to depress a sprayer in the inverted position.

Q. Would it leak if inverted, even though the plunger were not depressed? A. Oh, certainly.

Q. Suppose they were merely laid over on their sides, where there would be no depression of the plunger. A. No, there would still be leakage.

Q. Was there any other disadvantage to merely inserting the sprayer in the bottle? A. Well, it was impossible to ship under those conditions.

Q. I mean aside from leakage. A. No other than the economics of it.

* * *

[915] Q. Do you ever recall Mr. McIntyre submitting to you the idea of a sprayer wherein the plunger would lock down? A. Yes.

Q. Did you actually see that device? A. Yes. He had samples of a lock—the type you push down and twist it to lock.

Q. Did he submit that to you as a solution to your problem? A. It was submitted only on what they were working on. It was not submitted as a finished leak-proof sprayer. You must understand how a certain type of sprayer might work with certain types of liquid, but in our particular type of product it would not. Now, I don't say that it would not work with a creamy, pasty substance, but in a very aqueous type of product, that pours very easily, then it would not.

Q. You are saying that you did not have a sticky type of product but you had an aqueous solution? A. No. Ninety per cent, basically, deodorized kerosene, which is very fluid.

Q. As production manager did any problems or difficulties come back to you concerning the use of a package wherein the sprayer would be hanging on the side of the bottle? A. Yes. From a breakage standpoint, Number One. Number Two, we used to get many reports back on pilfering [916] in stores. They were not securely attached.

Q. Now, when would the breakage occur? A. Normally in shipment.

Q. Are you speaking of breakage of the sprayer? A. Yes. We would have actual breakage.

Q. What parts of the sprayer would normally break? A. Normally the stem would dip, the end of it.

Q. That would occur between the time of shipment at Baton Rouge and the time it was received by the broker or retailer? A. Yes.

Q. Where would the pilfering take place? A. At the retail level.

Q. At the time that you severed your relationships with Cook did you know of any commercial use of a so-called leak-proof sprayer of any kind? A. Only the type I mentioned on Jergen's Lotion, where they had this cap over the end of the spout.

Q. Do you know of any in the field of insecticides? A. There were none.

* * *

[917] Q. As production manager of Wilco what has been your experience with respect to problems in packaging when you used the Bakan sprayer with the cover cap? A. Well, basically, I mean, as a comparison, I was away from plant production for several years, but comparatively, I mean, the—again getting back, the basic operation is economy, so apparently when you stick a sprayer in the package, I mean, you don't have all the excess labor that you would normally have.

Q. Explain to us in the same manner as you did before the steps of packaging when you use a sprayer that has a cover cap. How does it differ insofar as packaging is concerned? A. Well, we still insert them in the container manually. There is no way of getting away from that. But it is merely hitting the opening in the container and then our capping unit automatically tightens the cap onto the container.

Q. Prior to the insertion of the sprayer into the neck of the container or bottle is the cover cap attached to the sprayer, or do you put that on later? [918] A. No. We receive those with overcap attached.

Q. They are furnished to Wilco by Bakan with the cover cap on the sprayer? A. That is right.

Q. So you need not handle the cover cap separately from the sprayer? A. No.

Q. After the sprayer is inserted into the bottle is the operation of screwing the metallic cap onto the threads of the bottle automatic, or is that by hand? A. Depending on which line. We have done it both ways. Normally on our higher production volume items it is done automatically.

Q. It permits of automatic screwing of the cap onto the bottle, is that correct— A. That is correct.

Q. —at a predetermined torque? A. Yes.

* * *

[920] Q. Would you say that that method of packaging today by Wilco is a savings, economically, over and above

the packaging that was done in Baton Rouge? A. Oh, very definitely.

Q. What about complaints now; are you receiving similar complaints from the retail level with respect to breakage and pilfering? A. No, none from pilfering. The only breakage that occurs would be—which is a minimum source of complaint—would be breakage in the store by people knocking it off the shelf.

Q. Breaking the bottle? A. That is correct. Or breaking—if it would land on the sprayer cap itself it is possible to break it, but as far as any shipping breakage, we have had no complaints.

Q. You have no complaints of sprayer breakage whatsoever? A. That is right.

[921] Q. Do you have any complaints of pilfering of the sprayer? A. No, not inserted in the bottle.

Q. Do you know of any instance where a customer has complained about stealing of these sprayers off the bottle? A. No. The only complaints we have are functional.

Q. It has nothing to do with the stealing? A. It has nothing to do with the packaging.

Q. Can you name the various products being packaged by Wilco through your direction, using the Bakan sprayer having a cover cap? A. Yes. Basically our highest volume product—well, we have two fairly high-volume products. One is Clearex window cleaner, Beauty Quick spray starch, Biff Ant and Roach, and of course we have windshield sprayers, which we attach to a plastic flask and these are used, of course, in service station windshield service.

Q. Do they also use the Bakan sprayer with the cover cap? A. No cover cap on these.

Q. No cover cap in that case? A. These are not filled. They are an empty flask with a sprayer screwed onto the flask.

Q. So the three products now being packaged by Wilco utilizing the Bakan cover cap type of sprayer include Biff Ant and Roach, Clearex, and the starch product? [922] A. That is right. We have two others under consideration.

Q. And your method of packaging those three products is essentially the same in each case? A. Yes.

* * *

[925] Q. Now, I have two Bakan sprayers. This one is marked "Bakan-2." This one I have marked "Bakan-2 Modified." Can you look at these and tell me which of these two is being used in the packaging of Wilco products? A. We are using the modified at the present time.

Q. In what respect does that differ from the one marked "Bakan-2"? A. As far as I can tell, it is merely that we have a transparent chamber in here, against this.

Q. Have you noticed the difference at the upper side of the collar and the manner in which the seal is formed? I call your attention to the fact that there is a slight difference in the structure here. A. Yes.

Q. Have you noticed that? A. I am not familiar with this particular sprayer.

Q. You are referring to the Bakan-2 when you say you are not familiar with the— A. Well, the Bakan-2 Modified, that is what you would call this one. This is the sprayer I am familiar with.

Q. That is the one you are using now? A. That is right, sir.

Q. And in that one there is a projection in the inside [926] of the overcap, is there not, which fits within this ridge on the top of the collar? A. Yes.

Q. And on the Bakan-2 there is a ridge up on the inside of the overcap which engages the outside of the ridge on the top of the collar, is that correct? A. That would indicate this, yes. As I say, I am not familiar with this particular one.

Q. Meaning the Bakan-2? A. That is right, yes.

Q. You are familiar only with the Bakan-2 Modified? A. Modified.

Q. Mr. O'Reilly, how long have you been with the Wilco Company? A. Approximately a year and three-quarters, basically since March of 1961, specifically.

Q. Then, you wouldn't know whether this sprayer marked "Bakan-2" in which the seal between the overcap

and the collar is made on the outside of the collar rim—
A. No, sir.

Q. You wouldn't know whether that was used by Wilco before you came with them? A. I couldn't tell you. I don't know.

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[938] DEPOSITION OF JAMES A. McNEILL,

having been first duly sworn, deposed and testified as follows:

Direct Examination by Mr. Schmidt.

Q. Would you state your full name and address? A. J. A. McNeill. And the company address?

Q. Your home address, please. A. Home address, 6305 North Willard Avenue, San Gabriel, California.

Q. You are president of the Wilco Company, is that correct? A. I am.

Q. Were you instrumental in forming the Wilco Company initially? A. I was.

Q. About when, can you remember? A. 1936.

Q. Was this company owned solely by you at that time? A. No. It was originally a partnership consisting of myself and a gentleman by the name of High, H-i-g-h.

Q. Is Mr. High still with the company? A. No. He was with us for about three or four years and then we parted company.

Q. Did you subsequently bring in a man by the name of [939] Martin as a partner? A. Mr. Martin came in and took Mr. High's partnership.

Q. That was Andrew Martin? A. Andy, Andrew Martin.

Q. What type of business was Wilco formed for, that is, what did you do intitially? A. Originally our main business, when we started Wilco, was making sprayers, metal sprayers, for the Union Oil Company. That was our main business. After that we went into manufacturing products.

Q. Was Wilco Company subsequently incorporated? A. Subsequently incorporated.

Q. And it is a corporation today? A. It is a corporation, a California corporation.

Q. What was the purpose of the metal sprayers that you made and sold to Union Oil? A. Well, the type of sprayer that we made and sold to Union Oil would be manufactured by people prior to my forming the Wilco Company and we took it over. The metal sprayer was principally used for dispensing windshield cleaner fluid at that time for the Union Oil Company and, to my knowledge, was one of the first sprayers for dispensing windshield cleaner.

Q. The nature of that sprayer was a vertically reciprocating plunger, is that correct? A. Yes, that is correct. [940] Q. And it was mounted in the container for the purpose of withdrawing the material and spraying it? A. The sprayer was mounted on a cap and screwed into the bottle, and the plunger went all the way down to the bottom.

Q. The container cap had to be removed first, prior to insertion of the metal sprayer? A. That is right. The sprayer was made of brass.

Q. Approximately how many years did the Wilco Company make and sell those metal sprayers to Union? A. Well, we made them right up until the development of the plastic sprayer, and we were the sole source of supply to Union until that time, and that was probably—we formed the corporation—we formed the Wilco Company in '36. We probably made them right up to the development of the plastic sprayer, somewhere in the Forties.

Q. The plastic sprayer was developed by Wilco Company? A. The plastic sprayer was developed by Wilco Company.

Q. There was a Calmar division of the Wilco Company, is that correct, at a later date? A. Well, we started—when we made the metal sprayer it was made outside for us by a machine shop, and we controlled the manufacture of it, and then when we went into the plastic sprayer, why, then we set up the Calmar Company to manufacture plastic sprayers.

Q. What was the purpose of going from a metal sprayer [941] to a plastic sprayer? A. The purpose of going from a metal sprayer to a plastic sprayer was principally due to the fact that the Union Oil Company developed a windshield cleaner, and Dr. Flaxman, who was a specialty chemist of the Union Oil Company at that time indicated that the future success of windshield cleaners would be related to chemicals that would attack metal, particularly corrosion. So we then decided that we would try and make—use plastic. At that time plastics were coming in to where they could be used for this purpose.

Q. Who in your company was responsible for the development of a plastic sprayer? A. I would say that basically Andy Martin was responsible for the early development of the plastic sprayer.

* * *

[945] Q. Do you recall ever testing or looking at a so-called S-25 sprayer, a bayonet type of device? A. Well, S-25, is that a Calmar sprayer?

Q. Yes. A. Yes. Calmar was furnishing us with sprayers, and I am not sure of the exact date, but we had the so-called overcap or what I call leak-proof sprayer submitted to us by Calmar and by Bakan.

Q. Prior to that time do you recall Calmar having submitted to you a sprayer of the kind that the plunger is depressed and turned to hold depressed? A. Yes, I do.

Q. Do you recall the purpose of submitting that type of sprayer to you? [946] A. Yes. That was submitted for the purpose of shipping our product with the sprayer in it, and it was turned down by our laboratory as not being—well, both by our laboratory and by Marketing as not being satisfactory.

Q. For what reason was it unsatisfactory? A. Well, basically I believe the lab report on such a sprayer, if there was a written report—I listened to Flax. I am not sure. Basically it didn't function the way we wanted—in other words, we didn't feel that that was the right kind of a sprayer for a housewife to use. The locking device was such that we didn't feel it was a marketable type whether it performed or not. That was one reason we didn't use it.

Q. What were the difficulties that you experienced or knew about with respect to a so-called integral sprayer? A. Well, when we owned Calmar—when I owned Calmar, why, we had for many years endeavored to come up with what we termed a leak-proof sprayer, and we had made many different types of samples and different types of gadgets to try and do it, and we hadn't come up with anything that was satisfactory.

However, we did at all times wish to have one that could be shipped in the bottle because we felt that there was a big marketing potential for it. It was something that we were all looking forward to getting at some time.

Q. Do you recall any of your customers making a [947] request to you, to Calmar, for a leak-proof sprayer? A. I don't. Andy Martin was running Calmar, and I basically don't know whether, other than ourselves as a marketer, there were marketing requests, although we discussed it many times and felt there was a need for such a sprayer. Whether there were specific requests from customers or not I can't tell you.

Q. Do you recall whether or not there was any need or request or any discussions concerning a leak-pro sprayer for the Biff product at the time that you we working with Union Oil Company on that product? A. Oh, yes. We wanted to get a sprayer that we could put in the bottle for particularly ant and roach type of sprays, which were a coarse spray, and didn't lend themselves at that time to—well, this is either before or after aerosols.

Q. Why did you want a product of that type? A. Well, basically the only way we had to put a sprayer out on a can or a bottle of insecticide was to hang it on there with the neck ring that was being used, or that we used, and other people were using. We didn't think that was a satisfactory way to do it.

Q. Was the neck ring developed by the Wilco Company? A. Well, we developed our neck ring, but prior to that, why, Calmar, at the time we owned it, also had a neck ring for a very large customer, that used a lot of them. [948] I believe the product was known as a deordorant. I believe it was Nil, or some deodorant product, that first used large quantities of neck rings on them.

Q. By a "neck ring" do I understand you to mean a device that connects to the neck of the bottle? A. The neck ring that we developed was a piece of cardboard or heavy paper that went around the neck of the bottle, and the sprayer hung on the side of the bottle.

Q. The neck ring had a hole for receiving the dip tube of the sprayer, is that correct? A. That is correct.

Q. You say that was not entirely satisfactory from a packaging standpoint? A. Well, we didn't feel it was the ultimate. It would be much better to put it in a bottle. We also had a pilferage problem. Everybody in marketing has in the grocery store when you hang something on something. We felt it would be much better to have a sprayer that would go in the bottle.

Q. Do you recall any discussions concerning the alleviation of the pilfering problem if you could mount the sprayer in the bottle at the time of shipment? A. Well, we had many discussions regarding developing a leak-proof—or a sprayer that could be shipped in a bottle, and at all times we were striving to obtain one from—while we owned the company—from our own company, or since then from people that took it over, or anybody else [949] that was in the sprayer business.

* * *

[951] Q. Based upon those years of experience in packaging, what do you have to say with respect to the package that includes a leak-proof sprayer as compared with one that has a sprayer on the side of the package? [952] A. Well, we feel it is a step in the right direction, and I think the proof of that is the fact that we have packaged our Clearex in a package that has a leak-proof sprayer in it, and in addition our present Beauty Quick starch has a sprayer in it, which is the direction we have gone after we got a satisfactory leak-proof sprayer.

Q. From the standpoint of the housewife or the ultimate consumer, which of the packages would you feel would be more attractive? A. Do you mean with a sprayer in the package?

Q. Yes. A. Separate? We feel that there is no comparison between having a sprayer in the package and having it hanging on the side of the package, particularly

inasmuch as today people using sprayers to dispense with on household products are competing directly with aerosol products, which are a self-contained unit. And basically the advent of aerosols has made the necessity for a leak-proof sprayer much more than it even was before aerosols came on the market, from a marketing standpoint.

Q. Why would a housewife desire a sprayer in the container because of her having been acquainted with the aerosol product? A. So she can pick up a package with a sprayer in it and unscrew the cap, like she can take off the cap of an aerosol, and spray, without having to do anything else. [953] In other words, it is easier for her.

Q. Do you feel that the housewife tends to object to the necessity of removing the metal cap and inserting the sprayer that hangs on the side? A. Well, we feel in marketing today that anything that you can get that simplifies a package and leaves the housewife less to do, or less to think, or less—other than to take it up and use it, would be satisfactory and a step in the right direction.

Q. Now, prior to the advent of the Bakan sprayer with the cover cap why did you not merely insert the sprayer in the bottle and ship it in that fashion? A. Because the former sprayer before the advent of a leak-proof sprayer could not be shipped in a bottle satisfactorily. Otherwise we would have done it many years ago.

Q. Tell us why it couldn't be shipped satisfactorily. A. Well, basically it would pump itself out in shipping, or it didn't have the—it wasn't constructed properly to lend itself to shipping. There was no cover on it and it wasn't constructed to prevent leaks.

Q. By that do you mean leakage of the product to the outside of the container, past the sprayer? A. Leakage of the product to the outside of the container and leakage of the product actually inside the cap are both important features, a lot more important in some products than others.

[954] Q. What about the breakage factor? A. The breakage factor on sprayers?

Q. Inserted in the bottles at time of shipment. A. Well, in other words, before they leaked; we didn't ship

them in the bottle. Since the advent of what we term the leak-proof sprayer here we have no breakage problem.

Q. Yes. But my question is: Had you shipped with the sprayer in the bottle without a cover cap do you feel that there would have been a breakage problem or not? A. Well, we wouldn't have shipped because they would leak, pump themselves out, so we never got to this point of actually trying it out for breakage.

Q. The very fact that it would leak was sufficient, as far as you were concerned, not to— A. That was the main thing, yes.

Q. At the time that the need for a leak-proof sprayer came what was done, if anything, by way of attempting to develop a solution to the problem by Wilco or Calmar? A. Well, as I said, previously we tried to develop a leak-proof sprayer and made up several types of so-called leak-proof gadgets or modifications of the sprayer, and none of them were entirely satisfactory, and we never did find a satisfactory one until we got—until we adopted the Bakan sprayer, was the first satisfactory leak-proof sprayer as such, that we went ahead with our program of putting a sprayer in the bottle.

[955] I might say here that we had been buying sprayers from Calmar for many years and, incidentally, many millions, ever since Calmar was taken over by Drackett, and the former sprayer that you mentioned, where they pushed it down and turned it, was one that was getting closer to our need, but still wasn't satisfactory.

Q. Prior to the time that Calmar was purchased by Drackett you said many attempts were made to come up with gadgets that would solve the problem. Do you recall the nature of any of those gadgets? A. Oh, yes. We discussed putting a Celloseal band over the top of the sprayer, plugging up the bottom of the sprayer to keep it from pumping itself out. Many, many different types of ideas were presented, but in none of them did we come up with the solution that would make it simple for the customer to use the sprayer once we put it out on the market. In other words, if we plugged up the bottom of the sprayer the customer would have to take off something, and it wasn't suitable for merchandising.

Q. Did you ever attempt to commercialize any such gadgets? A. Did we ever attempt to commercialize it? Do you mean market it?

Q. Market it. A. We never got it developed to the stage where it was marketable, in our opinion. I think all of this early [956] playing around with trying to develop a leak-proof sprayer, I think, ultimately led to the development of one, but we hadn't reached this point prior to our—my getting out of Calmar and Calmar going over to Drackett.

* * *

Cross-Examination by Mr. Cole.

Q. Mr. McNeill, your testimony indicated that you felt that this mounting of the sprayer in the bottle prior to delivery to the ultimate customer was a desirable thing, and that a leak-proof sprayer would be necessary in order that it could be achieved, is that correct? A. That is correct.

Q. I believe Mr. Flaxman indicated that your company, the Wilco Company, was interested primarily in buying the Bakan-2 sprayer, of which I show you a sample. Do you confirm that? A. If this is the one we are buying, this is it, yes.

Q. Are you buying this one, which is the Bakan-3 model, having the more or less triangular head, with the depression in the middle? A. Are we buying this for windshield cleaners? I really don't know.

Q. Let me show you this, too. There is a little stud— [957] A. We have had so many modifications of sprayers.

Q. There is a little stud. A. I am not much better than Flaxman. I have seen the sprayer. Whether we are using this one ourselves—I believe at the time we considered it for use for service stations. I am not sure whether this is the one we are using.

Q. Let me explain that this Bakan-3 sprayer, which I have just shown you, has some inner seals which purportedly prevent leakage of the liquid into the overcap. Now, are you buying that sort of thing in addition to the Bakan-2 sprayer, which does not prevent leakage into the

overcap? A. Well, if we are we would be buying it for service station use, and I am not sure whether we adopted this head or this sprayer as such. I certainly can find out but I don't know right now.

Q. So your best recollection is that this is your major purchase so far as these pump sprayers are concerned, the Bakan-2 type of sprayer? A. Yes. This is our major purchase, but if we are using this for service station use we buy a lot of these, but I just don't happen to know if this is the exact sprayer we are using.

Q. I see. You made reference to leak-proof sprayers as a desirable thing. Do you regard this Bakan-2 sprayer as a leak-proof sprayer? [958] A. For purposes of what we are talking about here, yes, we certainly consider it that.

Q. Are you acquainted with the fact that the Bakan-2 sprayer has no provision to prevent leakage into the overcap? A. Well, as compared to this one?

Q. Yes. A. Yes, I am acquainted with that.

Q. I think you mentioned that one of the disadvantages of the sprayer which merely used an overcap was that you got leakage into the overcap, is that right? A. That is right. I mentioned that, yes. However, these sprayers that we are now using do not leak into the overcap like the sprayers used to many years ago, as much.

Q. Do you mean if you inserted one of these Bakan-2 sprayers it would not leak into the overcap? A. Not as much as they used to when we were making them years back.

Q. Has there been any change made in the Bakan-2 sprayer, so far as you know, which would prevent leakage into the overcap? A. Well, do you mean since the advent of the Bakan-2 sprayer?

Q. Yes. A. I don't know.

Q. I see. A. I imagine they change them periodically. I don't [959] know.

Q. Are you familiar with the internal structure of these sprayers? A. Well, generally speaking, yes, I am familiar. I used to be in it. As to the—all the small details of either of these sprayers, I am not even up on it any more.

Q. Are you sufficiently informed to recognize that the discharge passage in the Bakan-2 sprayer is not obstructed so that if you insert the sprayer, the liquid may run out through this small orifice in the head? A. Yes, but a lot of that depends upon the type of product you use.

Q. Do you mean, for instance, if you use molasses it wouldn't come out? A. Well, I mean that if you use a solvent-based product in many cases it will come out faster than it will with a water-based product.

Q. But water does leak out of these sprayers into the overcap? A. Yes. Under certain circumstances I am sure it will.

Mr. Cole: That is all.

Mr. Schmidt: No questions.

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[964] DEPOSITION OF LEE E. McINTYRE,

having been first duly sworn, deposed and testified as follows:

Direct Examination by Mr. Schmidt.

Q. Will you state your full name, please. A. Lee E. McIntyre.

Q. And your residence address? A. 221 South Cliffwood, Los Angles 49.

Q. Are you acquainted with the Calmar Company of Los Angeles? A. Yes.

Q. How long have you been acquainted with that company? A. Well, I'd say since its inception.

Q. Do you know approximately when that was? A. I believe it was first formed as a partnership about 1943 or '44, or somewhere along there.

Q. Let's put it this way. Do you recall what you were doing at the time that you first became acquainted with the formation of the Calmar Company? A. Yes. I was working for Union Oil Company.

Q. In what capacity? A. I was a division manager.

Q. How long did you work for the Union Oil Company? A. Sixteen years.

[965] Q. Between what dates, approximately? A. 1930 and 1946.

Q. What occasioned your becoming acquainted with the Calmar Company? A. Well, we did a lot of business with Wilco Company, who were the forerunner of Calmar Company, when I was manager of Specialty Sales of Union Oil Company.

Q. Were you at that time acquainted with management in the Wilco Company? A. Yes.

Q. Can you name those individuals? A. Yes. J. A. McNeill and A. M. Martin.

Q. Were those individuals also, to your knowledge, at that time associated with the Calmar Company? A. Well, the Calmar Company at this particular time that I am speaking of, when I was manager of Specialty Sales, was not formed.

Q. I am speaking of at the time of the initial formation of Calmar Company. A. At the time of its initial formation they were the principals, yes.

Q. To your knowledge at that time? A. To my knowledge they were the partners.

* * *

[972] Q. You spoke of costs. Can you compare costs of manufacture insofar as the metallic sprayer and the plastic sprayers are concerned? A. Well, the original metal sprayer that we bought from Wilco, to the best of my knowledge, was in the 15-cent range per unit. We later—they later developed a cheaper model that dropped down into the 12-cent bracket and later, after the plastic sprayer was developed, it dropped down into the six, seven, eight-cent bracket, along in there. [973] I can't remember the exact figures.

Q. At the time of Union's use of a metallic sprayer for dispensing windshield cleaner, did any question arise as to difficulties or problems incident to distribution of the sprayer separately from the container in which the windshield wiper was distributed? A. Could you reword that? I don't believe I quite follow you there.

Mr. Cole: I didn't either.

Mr. Schmidt: Would you read the question.

If there is an error in there, we will catch it when you read it.

(The pending question was read by the reporter.)

Mr. Schmidt: It should be "windshield wiper liquid."

The Witness: Well, I don't recall any problems. There was some thought to packaging a unit with a sprayer, but we were never able to do so because we knew—we never had any way of shipping it, except to ship the sprayer in a separate package and then have the customer insert it into the bottle.

Mr. Schmidt: For what reason did you give thought at that time to shipping the sprayer in the container in which the liquid was packaged?

A. Well, simply from the standpoint of selling a complete unit, a complete applicator unit, saving the cap cost and saving the cap shipping cost, and saving the box [974] that you had to package the sprayer in separately.

Q At a later date did the need for packaging the sprayer with the container become more acute? A. Well, do you mean during a later date with Union Oil?

Q. No. Subsequent to the abandonment of the use of the metallic sprayer. A. Well, you are covering quite a range of territory here now. I am still over in Union Oil, and you are still asking me questions about Union Oil, and then you are asking me something about later. How much later?

Q. Perhaps I could clarify it. While you were still at Union Oil did the need for packaging the sprayer with the container arise? A. Well, it was never what I would call acute. It was never an acute problem while I was with Union Oil because there really wasn't enough volume involved at Union Oil to make it an acute problem.

Q. While you were with Union Oil was the windshield cleaner ever distributed in other manners than directly to your service stations? A. Well, the windshield cleaner was also distributed under the name of Clearex to the grocery trade and to the drug trade for resale to consumers.

Q. Was that done at the time that you were still using the metal sprayer? [975] A. Yes.

Q. Now, with respect to the distribution to the consumer trade did you find any need at that time for a sprayer that could be mounted in the container? A. I can't recall any particular reason for wanting a sprayer mounted in a container at that time because the metal sprayers we were putting out in those days, they were made in such a manner that they would last for 30, 40, 50 bottles of cleaner, and it was really only necessary for a person to buy one sprayer, and then they would just—they should buy dozens of bottles to go with that sprayer and just move it from one package to another.

* * *

[976] Q. Now, during the time that you were a partial owner of Calmar did you at any time work with Cook Chemical Company of Kansas City, Missouri? A. Yes, I did.

Q. In what manner? A. Well, I was the liaison man between the company and Cook Chemical insofar as scheduling of requirements or production requirements with them, sales contracts, development work, et cetera.

Q. Do I understand that Cook became a customer of Calmar? A. Yes. In 1949 they became a very good customer of Calmar.

Q. Did you have anything to do with that personally? A. Yes.

[977] Q. How did that come about? A. Well, in response to an inquiry from someone in Cook Chemical—I can't recall his name at the moment—we sent samples of sprayers to them, as we did to many people who wrote in for samples, and as a result of that sampling we received an order from Cook Chemical for—the initial order from Cook Chemical I remember very well because it was at that time a very large order to Calmar Company, for 100,000 sprayers, which was of our glass cleaner type of sprayer or our—more or less general purpose sprayer, I guess you would call it.

Q. That was a plastic sprayer? A. Yes. It was a plastic sprayer made from Vinylite.

Q. Did Cook Chemical, in placing the initial order, indicate to you the purpose they intended to make of it? A. Yes. It was going to be used for an insecticide, and

we checked it out in their insecticide to be sure that the sprayer wouldn't be dissolved, because that was one thing we practically always had to check with any new product, was to get a sample of the product and then put a sprayer in and let it stand on the shelf for a while to be sure that it had the proper shelf life.

Q. Subsequent to the initial order did Cook Chemical Company continue to purchase sprayers from Calmar? A. Yes, for a number of years, until we opened a plant in Puerto Rico, and then we started supplying them [978] principally from the Puerto Rican company we organized called Marmac.

Q. Tell us a little about the volume of sales to Cook. Did they increase, or remain the same? A. Yes, I would —I believe that Cook Chemical purchased approximately a million sprayers from us the first year that they purchased sprayers from us, and the following year I believe they purchased around three million sprayers, and in subsequent years they purchased between five and seven million sprayers annually.

Q. Did you consider Cook as a major customer of Calmar at that time? A. Very much so.

Q. Did those sales to Cook by Calmar continue up to the time that you sold out to Drackett? A. Well, either from Calmar or Marmac Company?

Q. Yes. A. Yes.

Q. During the time that Calmar was selling to Cook were any requests made to you personally for improvements in the sprayer in any manner? A. Oh, yes. We had many, many requests for—we were always trying to make up different sprayers for them, sprayers to spray from gallon cans and sprayers that could be shipped in a package.

Q. What was the purpose, if you know, for Cook's [979] request for a sprayer that could be included in the package? A. Well, I think the primary reason was to prevent—was to avoid pilferage. They had a lot of—you see, in the case of Cook they used a sprayer with every bottle, every pint or quart bottle they shipped, and they were hung on the side of the bottle with a plastic collar, and they had quite a bit of pilferage in the stores, where

kids, I guess, would come in and take the sprayers and carry them out, and then someone would buy the package and there wouldn't be any sprayer with it.

So I think that was, to my memory, the principal reason that they wanted to get something that could be shipped right in the package and locked into the bottle, that couldn't be removed by pilferage.

Q. Do you recall whether or not either you or the Calmar Company made any suggestions to Cook as to how that problem might be solved? A. Well, we submitted certain prototypes or samples to Cook from time to time, but we never gave them anything that was satisfactory. We never could—we tried a variation of a bayonet-type dispenser, that we—a bayonet-type closed dispenser that we put out to certain hand lotion customers, where we would lock the head down into the collar, onto an "O" ring and put a polyethylene cover over the spray orifice. But never do I—we never were able to lick the problem insofar as liquids of that type [980] were concerned. We just couldn't stop them from leaking.

Q. That method, then, was not satisfactory to Cook, is that correct? A. That is correct.

Q. And it was not satisfactory to Calmar either? A. No. We never—we may have made one or two experimental sales of that type of unit to various customers, but never were we able to market it in any quantity because we could never be sure that it was a leak-proof package.

Q. Do you recall ever having made any sales to insecticide manufacturers other than Cook of the bayonet-type? A. No, not to my knowledge.

Q. Would you say, then, that for the most part the bayonet-type was successful only with products other than insecticides? A. For thicker products, such as hand lotion.

Q. What efforts were made at Calmar to solve the problem during that period, do you recall? A. Well, I think we were—those of us who were interested in the development were working on the problem off and on for all the years I was with Calmar.

* * *

[1001] DEPOSITION OF ANDREW M. MARTIN,

having been first duly sworn, deposed and testified as follows:

Direct Examination by Mr. Schmidt.

Q. Will you state your full name and residence address. A. Andrew McKay Martin, 2749 Via Campesina, Palos Verdes Estates, California.

Q. Mr. Martin, I hand you soft copies of two patents, both issued on November 7, 1944, to Wilco Company, Los Angeles, California, a co-partnership composed of Andrew M. Martin and James A. McNeill, No. 2,362,080 and 2,362,-081, both of which name Andrew M. Martin, Los Angeles, California, as the inventor, and ask you whether you are the same Andrew M. Martin as is named in those two patents as the inventor. A. I am.

Q. Inasmuch as the patents indicate an assignment to Wilco Company, a co-partnership, I presume you were the partner of Mr. McNeill in the Wilco Company at that time, is that correct? A. It is.

Q. What was the business of Wilco Company during the partnership between you and Mr. McNeill? [1002] A. At the time of filing or at the time of issuance?

Q. I want generally the type of business, the nature of the business during the partnership, during the time that you and Mr. McNeill were partners, in broad terms. A. We were involved in the manufacture of spraying and dispensing devices, other applicator devices, and also in the packaging of proprietary and private-label packaging.

Q. What was the nature of the packaging operation so far as products are concerned? A. In general terms they could be covered by household and automotive items, products.

Q. Who were your principal customers in packaging? A. Our main customer at that time was the Union Oil Company of California. We had many others.

Q. You mentioned dispensers or sprayers. Did the Wilco Company manufacture and sell dispensers and sprayers? A. For a short time we carried on this business, at its inception, under the name of Wilco Company.

Shortly thereafter we formed another company, Calmar Company, for the reason that we did not want to openly appear to be in competition with our own customers, private-label customers.

* * *

[1003] Q. Now, is it your testimony also that by placement of the sprayer in the bottle, the presence of the sprayer in that manner will enhance the sale of the product more so than if the sprayer is not attached to the product in that manner at the time the customer buys it?

* * *

[1004] The Witness: The sprayer and the product are usually displayed side by side in the retail market. I know from experience that the Calmar Company sold more sprayers and/or dispensers after the use—or after the custom of packaging the sprayer with the product was used. This is the thing that I personally was interested in, for that very reason. I don't know if that answers your question or not.

Mr. Schmidt: You are now saying, are you not, that a given product will sell better if there is a sprayer associated with it than if the customer had to go somewhere else to buy the sprayer?

* * *

[1005] The Witness: I do not think that the consumer had to go of necessity somewhere else to buy the sprayer as the two—as the product and the sprayer were displayed side by side on the retailer's shelf. However, I think the answer to the question is borne out by the fact that large users of our sprayers increased their sales by merchandising the two pieces together. I think a check of the records may show this, prove it or disprove it.

* * *

[1006] Q. Now, going one step further, would you say that placement of the sprayer in the container would be still better than having it alongside the product? A. Yes.

Q. Why? A. The packaging of the sprayer fastened to it in some manner was not altogether satisfactory be-

cause of the fact that the two would become separated in the handling.

* * *

Mr. Schmidt: Q. When did you first become aware of the need or desire by any of your customers for placement of the sprayer in the container?

A. My first recollection of this request came from Mr. McIntyre, who was then manager of the Specialties Division of the Union Oil Company shortly after the use of thermoplastics for the manufacture of the sprayer.

Q. Did you make any effort yourself, personally, to come up with a solution or an answer to the problem submitted [1007] to you by Mr. McIntyre? A. I did.

Q. What were the results of your efforts? A. The best result obtained at that time was the creation of a container with a flat side, the other side being rounded, so that when it lay on its side the sprayer was above the liquid level in the container.

Q. Why did you want the sprayer to be above the liquid level in the container when the container was lying on its side? A. So that it would not leak out, so that the product would not leak out of the container.

Q. In what manner would it leak out of the container if the liquid level were not below the sprayer? A. In any one or more of three ways: up through the stem, cylinder, piston and head, through the orifice; secondly, through the breathing mechanism incorporated into the unit; and, third, through the clearance between the piston and the collar, which is in part covered by No. 2.

Q. What would be the purpose of ever wanting to lay the container on its side? A. To prevent it from leaking.

Q. Do you mean by that that— A. In this manner we could keep the sprayer above the liquid level. There was another reason also. This container—this combination of product and sprayer was to [1008] be carried in the glove compartment of an automobile, which would not allow—which was not designed for upright containers.

Q. Then, the purpose of laying the container on its side was to permit placement of the container in a glove compartment of an automobile, is that correct? A. That is correct.

Q. Now, what type of product did you have in mind that would be used in such a container? A. The product was to be a windshield—an automobile windshield cleaner.

Q. Did you present this idea to Mr. McIntyre? A. I did.

Q. What was his reaction? A. "It cost too much."

Q. Did you at any date subsequent to that again work on the problem of placement of the sprayer in the container? A. Yes.

Q. Did you come up with any ideas? A. Yes.

Q. Can you tell us the nature of those ideas. A. Yes. We thought of encompassing completely that part of the sprayer that was inside the bottle, below the cap, in a plastic film, was one idea.

Q. Was that a film that would be sprayed onto the lower portions of the sprayer? [1009] A. No. It was more of a bag type.

Q. How would it be associated with the container? A. It would be inside the container and it would be also down into the liquid.

Q. Would any part of the sprayer be contained within that member? A. All of that would be within the bottle, inside it, all under the cap.

Q. To whom did you submit that idea? A. I don't know that we submitted it to anybody. I don't recall. I just—it was one of the things that we came up with. We looked it over and checked it over, and I think we just discarded it.

Q. For what reason? A. Went on to another idea.

Q. Why did you discard it? A. We were looking for ideas, ways and means of doing this. We dipped the end of the stem or tubing in various chemicals with the idea of forming a skin over the apertures. We tried to reduce the size of the breathing mechanism holes to a point where they would permit passage of air and not—and prohibit the passage of liquids.

We plugged the end of the tubing. We attempted to use the bayonet type of lock, then used in the manufacture of dispensers, in order to make them leak-proof, and we capped the spray nozzle. Samples of this latter method

were [1010] submitted to various customers but found by them to be still wanting.

Q. Did you find any of your various and sundry efforts along that line to be satisfactory to any of your customers? A. Yes in the case of the dispensers but no in the case of the sprayer.

Q. When you say "the dispenser" are you speaking of the bayonet type? A. Yes. With the bayonet type—yes, with the cap on the end of the spout.

Q. This cap was merely for the purpose of closing the orifice, is that what you are saying? A. Yes.

Q. Was that idea ever accepted by any customer who used the sprayers for dispensing of insecticides, for example? A. No.

Q. Or for any other product that is not viscous in nature, such as lotions? A. No, not to any extent.

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[1011] A. I don't know. I really don't know. We were looking for any way to solve it. One idea very often leads to another. I would be simply guessing.

Naturally when we look for ways and means to do anything particularly on that—on the sprayer device, it costs so little in the beginning compared with the work that is in it, we would give a great deal of attention to—I mean, it would just have to be—in order to be practical it would have to be an economical, inexpensive way, something that we could incorporate into something that we already had. This is what we were continually striving to do.

Our object, our main object, with any of our customers was to try and produce an article that they could use that would be so inexpensive to them that they could give it away with each and every bottle of their product. This is the thing we were continually striving to do, because in this way we could increase our production volume.

Q. Prior to the time that Cook became a customer of Calmar and commenced giving the sprayers away with its product, was there any large-scale use of plastic sprayers as a give-away item along with the product? [1012] A. Yes. There was intermittently by people who made deals. I think there were times when the Union Oil Company

offered a sprayer and a bottle for a certain price as a unit. However, they were not packaged together.

The first actual customer in a large way to do this, that I can recall, perhaps is the manufacturer of the product Nil. They used to run full-page ads of their product, which I believe was a deodorant, in which they would advertise a container full of this chemical plus a sprayer for so much money. They built up their sales volume in this manner very quickly.

In fact, it amazed us. I think as far as dispensers were concerned, the Colgate Company used about five million of our dispensing units. These were the bayonet-type of dispenser, used in connection with the sale of their hand lotion. This is one of the early single-unit packages that I recall. There were others, not so large, that I don't recall.

Q. Would you say, then, that the need for packaging the sprayer with the container as an integral part of the container was present, then, long before the request to you by Cook Chemical for such a product? A. A need for this has always existed, as far as I am concerned. Perhaps the full need was never realized, but there certainly was a place for it as evidenced by the fact that it is now common practice.

[1013] Q. Did that need become more apparent to you when the request was made by Cook? A. Yes, it was, certainly.

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[1014] Q. Now let's go back to this. The only sprayer with which you had any connection during your employment with these companies, which was adapted to be put in a bottle, was the S-25 LP; isn't that correct? A. I don't know what that means. If I ever did, I have forgotten.

Q. There was a sprayer, and I think the same structure was used in the dispenser which had an "O" ring in it. Does that strike a responsive chord? There was a bayonet joint. I think that is the term you used. A. Yes, yes, this is the dispenser (indicating).

Q. That is the one you are talking about? A. Yes.

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